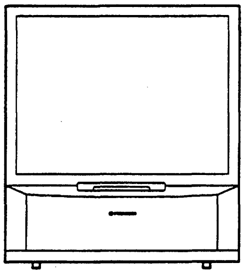
Service Manual

PIONEER®
The Art of Entertainment



ORDER NO.
ARP2952

PROJECTION MONITOR RECEIVER

SD-P50A3-K

SD-P55A3-K

THIS MANUAL IS APPLICABLE TO THE FOLLOWING MODEL(S) AND TYPE(S).

Type	Model		Power Requirement	Remarks
	SD-P50A3-K	SD-P55A3-K		
KUXC	○	○	AC120V	

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1. SAFETY INFORMATION

This service manual is intended for qualified service technicians ; it is not meant for the casual do-it-yourselfer. Qualified technicians have the necessary test equipment and tools, and have been trained to properly and safety repair complex products such as those covered by this manual.
Improperly performed repairs can adversely affect the safety and reliability of the product and may void the warranty. If you are not qualified to perform the repair of this product properly and safety, you should not risk trying to do so and refer the repair to a qualified service technician.

WARNING
Lead in solder used in this product is listed by the California Health and Welfare agency as a known reproductive toxicant which may cause birth defects or other reproductive harm (California Health & Safety Code, Section 25249.5).
When servicing or handling circuit boards and other components which contain lead in solder, avoid unprotected skin contact with the solder. Also, when soldering do not inhale any smoke or fumes produced.

NOTICE
(FOR CANADIAN MODEL ONLY)
Fuse symbols -▮▭⊞- (fast operating fuse) and/or -▮▭☒- (slow operating fuse) on PCB indicate that replacement parts must be of identical designation.

REMARQUE
(POUR MODÈLE CANADIEN SEULEMENT)
Les symboles de fusible -▮▭⊞- (fusible de type rapide) et/ou -▮▭☒- (fusible de type lent) sur CCI indiquent que les pièces de remplacement doivent avoir la même désignation.

1.1 SAFETY PRECAUTIONS

NOTICE : Comply with all cautions and safety related notes located on or inside the cabinet and on the chassis or picture tube.
The following precautions should be observed :

1. Do not install, remove, or handle the picture tube in any manner unless shatterproof goggles are worn. People not so equipped should be kept away while picture tubes are handled.
   Keep picture tube away from the while handling.
2. When service is required, even though the PROJECTION MONITOR RECEIVER an isolation transformer should be inserted between power line and the set in safety before any service is performed.
3. When replacing a chassis in the set, all the protective devices must be put back in place, such as barriers, nonmetallic knobs, adjustment and compartment covershields, isolation resistor-capacitor, etc.
4. When service is required, observe the original lead dress. Extra precaution should be taken to assure correct lead dress in the high voltage circuitry area.
5. Always use the manufacture's replacement components. Especially critical components as indicated on the circuit diagram should not be replaced by other manufacture's.
   Furthermore where a short circuit has occurred, replace those components that indicate evidence of overheating.
6. Before returning a serviced set to the customer, the service technician must thoroughly test the unit to be certain that it is completely safe to operate without danger of electrical shock, and be sure that no protective device built into the set by the manufacture has become defective, or inadvertently defeated during servicing.

Therefore, the following checks should be performed for the continued protection of the customer and service technician.

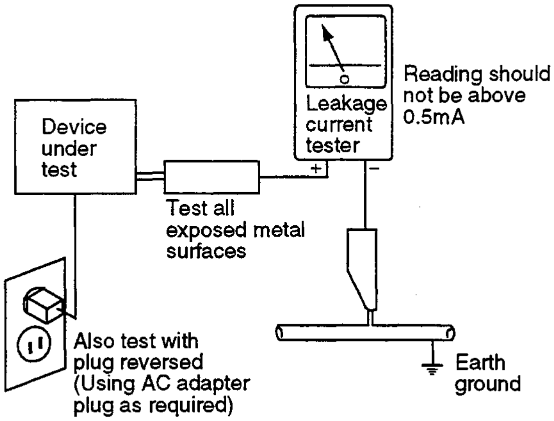
Leakage Current Cold Check

With the AC plug removed from the 120V AC 60Hz source, place a jumper across the two plug prongs. Turn the AC power switch on. Using an insulation tester (DC 500V), connect one lead to the jumpered AC plug and touch the other lead to each exposed metal part (input/output terminals, screwheads, metal overlays, control shafts, etc.), particularly any exposed metal part having a return path to the chassis should have a minimum resistor reading of 0.3MΩ and a maximum resistor reading of 5MΩ. Any resistor value below or above this range indicates an abnormality which requires corrective action. Exposed metal parts not having a return path to the chassis will indicate an open circuit.

Leakage Current Hot Check

Plug the AC line cord directly into a 120V AC 60Hz outlet (do not use an isolation transformer for this check). Turn the AC power switch on.

Using a "Leakage Current Tester (Simpson Model 229 equivalent)", measure for current from all exposed metal parts of the cabinet (input/output terminals, screwheads, metal overlays, control shaft, etc.), particularly any exposed metal part having a return path to the chassis, to a known earth ground (water pipe, conduit, etc.). Any current measured must not exceed 0.5mA.


Reading should not be above 0.5mA
Leakage current tester
Device under test
Test all exposed metal surfaces
Also test with plug reversed (Using AC adapter plug as required)
Earth ground

AC Leakage Test

ANY MEASUREMENTS NOT WITHIN THE LIMITS OUTLINED ABOVE ARE INDICATIVE OF A POTENTIAL SHOCK HAZARD AND MUST BE CORRECTED BEFORE RETURNING THE SET TO THE CUSTOMER.

High Voltage

This set is provided with a X-ray protection for clearly indicating that voltage has increased in excess of a predetermined value. Comply with all notes described in this Service Manual regarding this hold down circuit when servicing, so that this X-ray protection may correctly be operated.

Serviceman Warning

In the status of the black picture (video muting is being applied) when no signal is input, high voltage of this set during operation is less than 30.5kV. In case any component having some relation to the high voltage is replaced, confirm that the high voltage is lower than 30.5kV in the status of the black picture when no signal is input.

To measure H. V. use a high impedance H. V. meter. Connect (–) to earth and (+) to the FBT anode cable connector. (Refer to page 131.)

X-radiation

TUBE : The primary source of X-radiation in this set is the picture tube.

For continued X-radiation protection, the replacement tube must be the same type as the original, PIONEER approved type.

The picture tube (CRT Assy R, G, B) used in this set holds complete guarantee against X-ray radiation when the X-ray is sealed (See page 4). Accordingly, when the current in flowing to the picture tube (CRT Assy R, G, B), be sure to perform it by putting the tube into X-ray sealed applied state. Avoid absolutely to flow the current to the picture tube (CRT Assy R, G, B) itself. Moreover, when the voltage of the high voltage circuit becomes abnormally a little higher, the picture tube radiates X-rays.

Accordingly, when servicing the high voltage circuit be sure to replace as an assy with the POWER SUPPLY SERVICE Assy in the manner in which has been adjusted to perform normal operation.

1.2 PRODUCT SAFETY NOTICE

Many electrical and mechanical parts in PIONEER set have special safety related characteristics. These are often not evident from visual inspection nor the protection afforded by them necessarily can be obtained by using replacement components rated for higher voltage, wattage, etc. Replacement parts which have these special safety characteristics are identified in this Service Manual.

Electrical components having such features are identified by marking with a ⚠ on the schematics and on the parts list in this Service Manual.

The use of a substitute replacement component which dose not have the same safety characteristics as the PIONEER recommended replacement one, shown in the parts list in this Service Manual, may create shock, fire, X-radiation, or other hazards.

Product Safety is continuously under review and new instructions are issued from time to time. For the latest information, always consult the current PIONEER Service Manual. A subscription to, or additional copies of, PIONEER Service Manual may be obtained at a nominal charge from PIONEER.

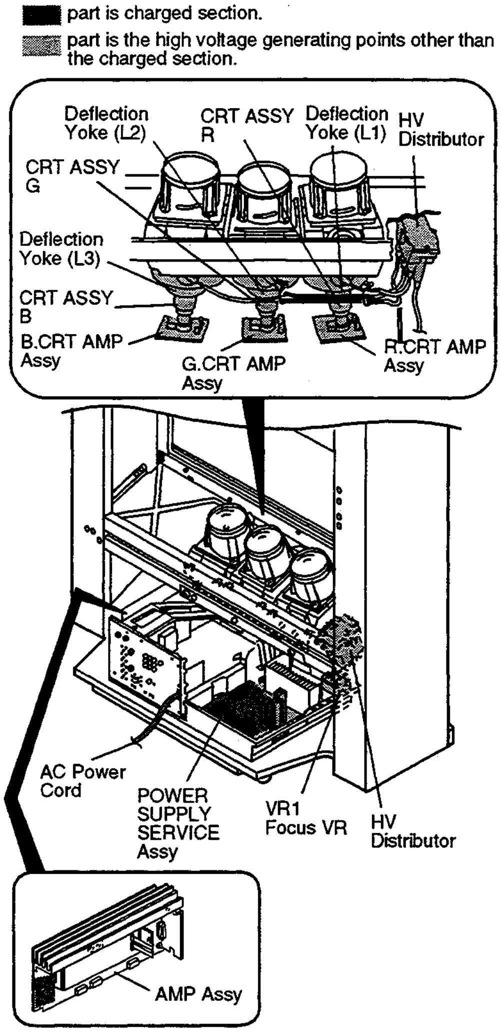
1.3 CHARGED SECTION, HIGH VOLTAGE GENERATING POINT AND X-RAY PROTECTION

■ Charged section

The circuit in which the commercial AC power is used as it is without passing through the power supply transformer. If the charged section is touched, there is a risk of electric shock. In addition, the measuring equipment can be damaged if it is connected to the GND of the charged section and the GND of the non-charged section while connecting the set directly to the commercial AC power supply, In this case, be sure to connect the set via an insulated transformer and supply the current.

■ Charged section (Power supply primary side)

1. The primary side of the POWER SUPPLY SERVICE Assy
2. AC Power Cord



■ part is charged section.
▨ part is the high voltage generating points other than the charged section.
Deflection Yoke (L2)
CRT ASSY R
Deflection Yoke (L1)
HV Distributor
CRT ASSY G
Deflection Yoke (L3)
CRT ASSY B
B.CRT AMP Assy
G.CRT AMP Assy
R.CRT AMP Assy
AC Power Cord
POWER SUPPLY SERVICE Assy
VR1 Focus VR
HV Distributor
AMP Assy

Fig. 1 Charged section and high voltage generating point

■ High voltage generating point

The place where voltage of over 100V is generated.

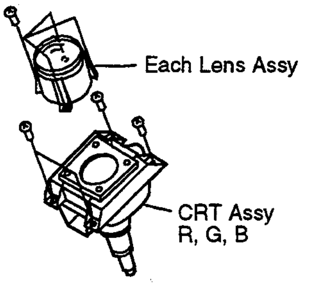
1. Charged section
2. POWER SUPPLY SERVICE Assy (including FBT) (30.0kV, 220V, 135V)
3. R. CRT AMP Assy (10.5kV, 220V)
4. G. CRT AMP Assy (10.5kV, 220V)
5. B. CRT AMP Assy (10.5kV, 220V)
6. CRT Assy R (30.0kV)
7. CRT Assy G (30.0kV)
8. CRT Assy B (30.0kV)
9. Focus Variable Resistor (VR1) (10.5kV)
10. Deflection Yokes (L1, L2 and L3) (Approx. 1100V at peak)
11. HV Distributer
12. Velocity Modulation Block of the AMP Assy (135V)

■ X-ray protection

- Regarding the parts which are relative to radiation of X-rays (There is the danger to radiate X-ray from the individual CRT Assy R, G, B), there are notifications of caution in the individual schematic diagrams. Be sure to read them for safety's sake.
- The component parts for X-ray protection are as follows: When the current flows to the CRT Assy R, G, B, be sure to perform it with these parts being attached. Protection from the X-ray radiation is maintained in the state in which these parts have been installed to the CRT Assy R, G, B. Accordingly, never supply current only to the CRT Assy R, G, B.

  Moreover, the anode voltage of the CRT Assy R, G, B should always be kept not higher than the predetermined value (in the minimum brightness and picture state when non signal input is less than 30.5kV). Be sure to drive the CRT Assy R, G, B by using a completely functional POWER SUPPLY SERVICE Assy (including HV Distributor) which have been adjusted completely in the combined state. (When the voltage abnormally becomes high, the X-ray protection circuit will operate.)

1. CRT Assy R, G, B (Do not dismantle CRT assemblies under any circumstances).
2. Each Lens Assy



Each Lens Assy
CRT Assy R, G, B

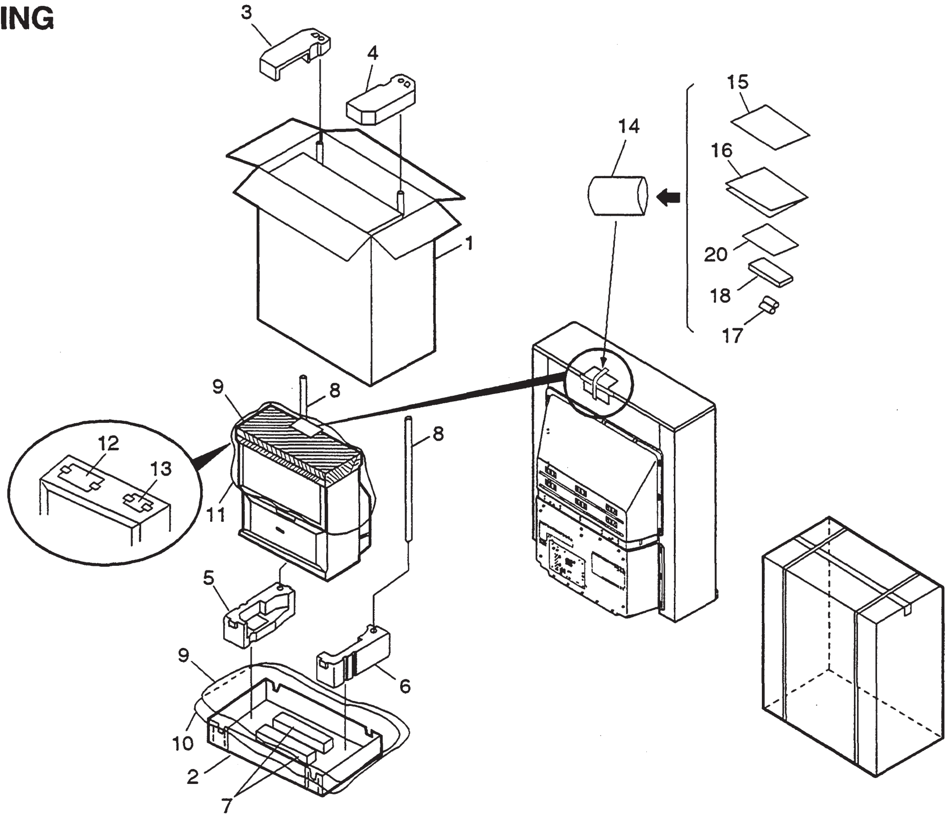
Fig. 2 Component parts for X-ray protection

2. EXPLODED VIEWS AND PARTS LIST

NOTES: • *Parts marked by "NSP" are generally unavailable because they are not in our Master Spare Parts List.*

- *The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.*
- *Parts marked by ☆ are important parts which relate in X-rays radiation. If any of these parts need to be replaced, always replace with specified parts.*
- *Screws adjacent to ▼ mark on the product are used for disassembly.*

2.1 PACKING



(1) PARTS LIST

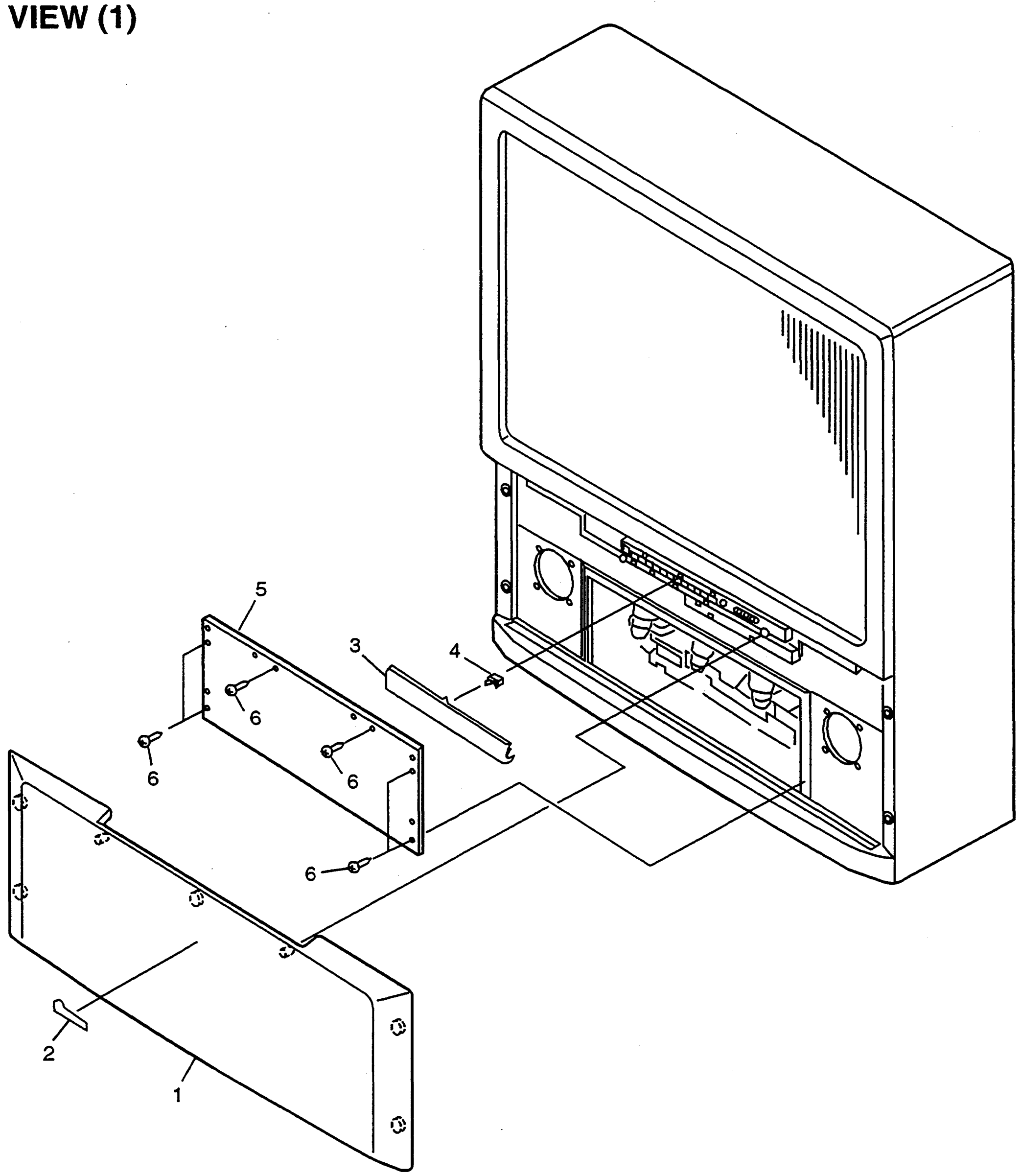
Mark	No.	Description	Part No.
	1	Upper Carton	See Contrast table (2)
	2	Under Carton	See Contrast table (2)
	3	Upper Pad L	AHA2163
	4	Upper Pad R	AHA2164
	5	Under Pad L	AHA2165
	6	Under Pad R	AHA2166
	7	Under Cushion	AHA2167
	8	Paper Tube	See Contrast table (2)
NSP	9	Packing Sheet	AHG1268
NSP	10	Vinyl Sheet	AHG1270
NSP	11	Vinyl Sheet	AHG1266
	12	CONVER Attention Card	ARM1120
	13	Caster Caution Card	ARM1125
NSP	14	Literature Bag	AHG1222
NSP	15	Warranty Card	ARY1050
	16	Operating Instructions (English)	ARB1510
NSP	17	Alkaline Dry Cell Battery (LR6, AA)	AEX1018
	18	Remote Control Unit (CU-SD103)	AXD1429
	19	Battery Cover	AZA7031
NSP	20	Caution Card	ARM1057

(2) CONTRAST TABLE

SD-P50A3-K/KUXC and SD-P55A3-K/KUXC have the same construction except for the following :

Mark	No.	Symbol and Description	Part No.		Remarks
			SD-P50A3-K/KUXC	SD-P55A3-K/KUXC	
	1	Upper Carton	AHD2884	AHD2885	
	2	Under Carton	AHD2887	AHD2888	
	8	Paper Tube	AHB1182	AHB1183	

2.2 FRONT VIEW (1)



(1) PARTS LIST

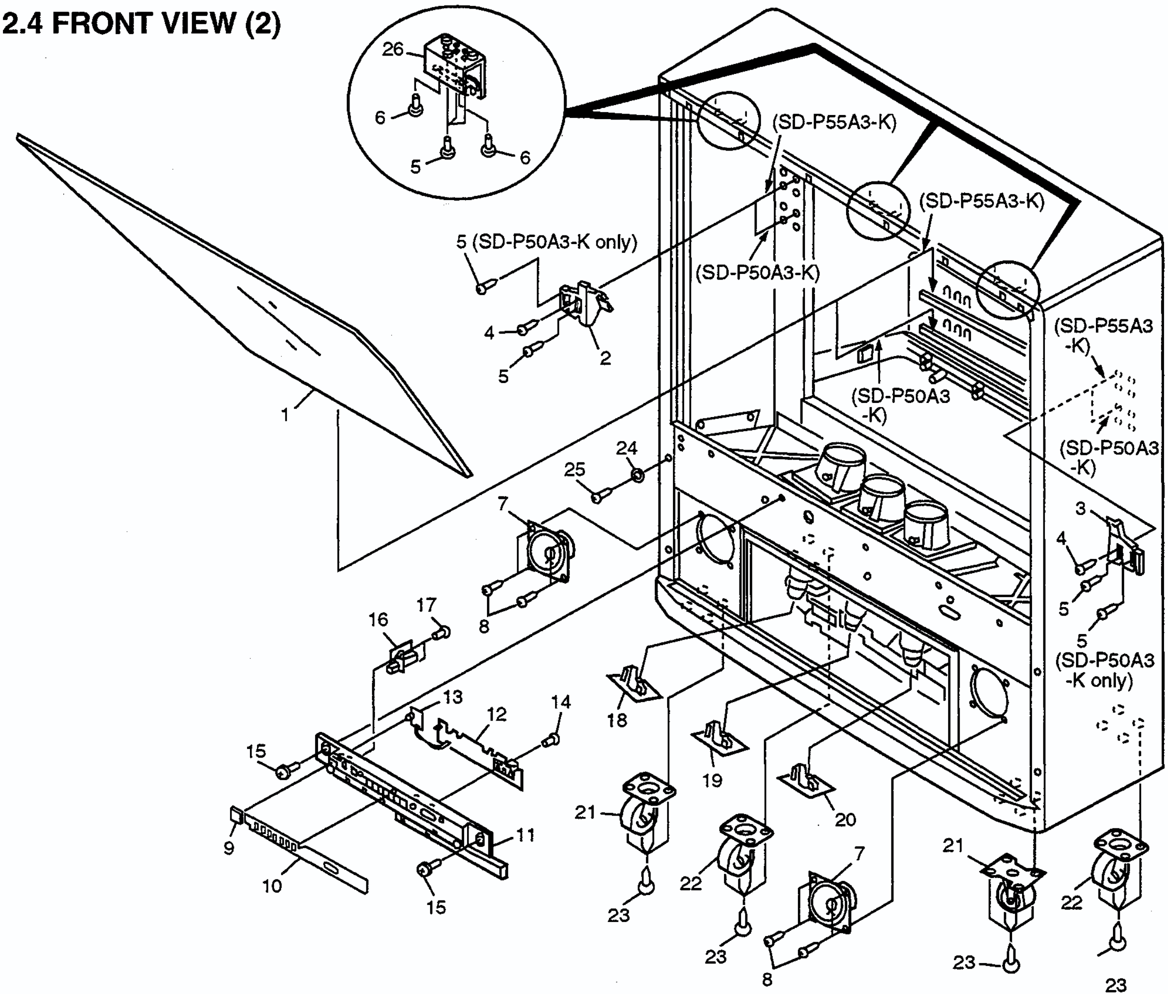
Mark	No.	Description	Part No.
	1	Grille	See Contrast table (2)
	2	Badge	AAM1074
	3	Door	See Contrast table (2)
	4	Catcher	AEC1609
	5	Blind Plate	AMM2765
	6	Screw	ABA1241

(2) CONTRAST TABLE

SD-P50A3-K/KUXC and SD-P55A3-K/KUXC have the same construction except for the following :

Mark	No.	Symbol and Description	Part No.		Remarks
			SD-P50A3-K/KUXC	SD-P55A3-K/KUXC	
	1	Grille	AMR2917	AMR2918	
	3	Door	AAN1431	AAN1432	

2.4 FRONT VIEW (2)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(SD-P55A3-K)
(SD-P55A3-K)
5 (SD-P50A3-K only)
(SD-P50A3-K)
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(SD-P55A3
-K)
(SD-P50A3
-K)
(SD-P50A3
-K)
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(SD-P50A3
-K only)
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(1) PARTS LIST

Mark	No.	Description	Part No.
	1	Mirror	See Contrast table (2)
	2	Mirror Side Holder L	AMR2921
	3	Mirror Side Hoder R	AMR2922
	4	Screw	VPZ40P120FMC
	5	Screw	ABA1124
	6	Screw	ABA1239
	7	Speaker	APV1047
	8	Screw	ABA1240
	9	Indicator Panel	AAK2687
	10	Control Sheet	AAK2686
	11	Control Panel	AMB2602
	12	Front Control Assy	AWZ6186
	13	Indicator Assy	AWZ6187
	14	Screw	ABZ30P120FZK
	15	Screw	ABA1234

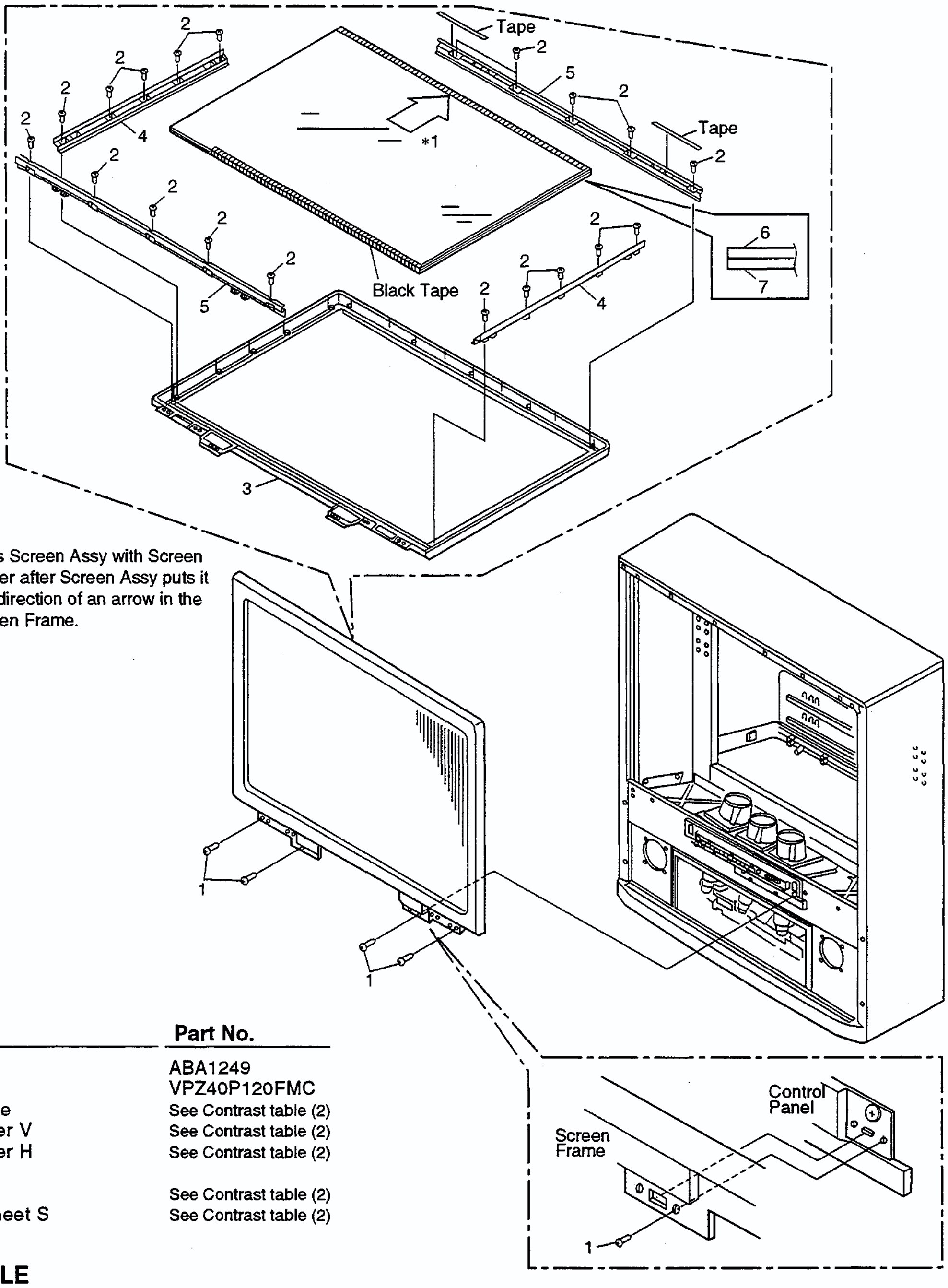
Mark	No.	Description	Part No.
	16	POWER SW Assy	AWZ6188
	17	Screw	BPZ30P120FMC
	18	R. CRT AMP Assy	AWZ6191
	19	G. CRT AMP Assy	AWZ6192
	20	B. CRT AMP Assy	AWZ6193
	21	Caster (Front)	AMR2863
	22	Caster (Rear)	AMR2547
	23	Screw	ABA1126
	24	Magic Tape	AEC1394
	25	Screw	BYC35P160FZB
	26	Mirror Holder	AMR2920

(2) CONTRAST TABLE

SD-P50A3-K/KUXC and SD-P55A3-K/KUXC have the same construction except for the following :

Mark	No.	Symbol and Description	Part No.		Remarks
			SD-P50A3-K/KUXC	SD-P55A3-K/KUXC	
	1	Mirror	AMR2937	AMR2938	

2.3 SCREEN FRAME BLOCK



*1 : Fixes Screen Assy with Screen Holder after Screen Assy puts it in a direction of an arrow in the Screen Frame.

(1) PARTS LIST

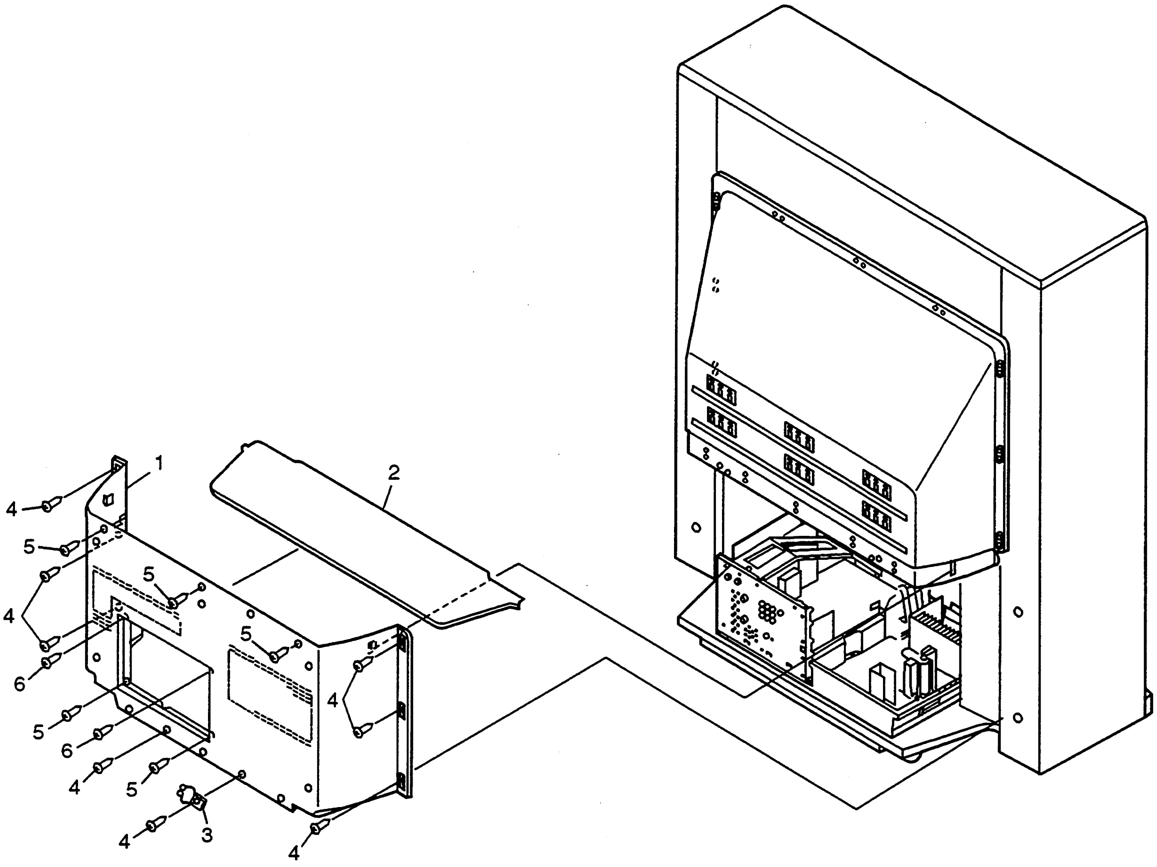
Mark	No.	Description	Part No.
	1	Screw	ABA1249
	2	Screw	VPZ40P120FMC
	3	Screen Frame	See Contrast table (2)
NSP	4	Screen Holder V	See Contrast table (2)
NSP	5	Screen Holder H	See Contrast table (2)
	6	Fresnel S	See Contrast table (2)
	7	Lenticular Sheet S	See Contrast table (2)

(2) CONTRAST TABLE

SD-P50A3-K/KUXC and SD-P55A3-K/KUXC have the same construction except for the following :

Mark	No.	Symbol and Description	Part No.		Remarks
			SD-P50A3-K/KUXC	SD-P55A3-K/KUXC	
	3	Screen Frame	AMB2599	AMB2600	
NSP	4	Screen Holder V	ANG2143	ANG2145	
NSP	5	Screen Holder H	ANG2142	ANG2144	
	6	Fresnel S	AMR2979	AMR2980	
	7	Lenticular Sheet S	AMR2976	AMR2977	

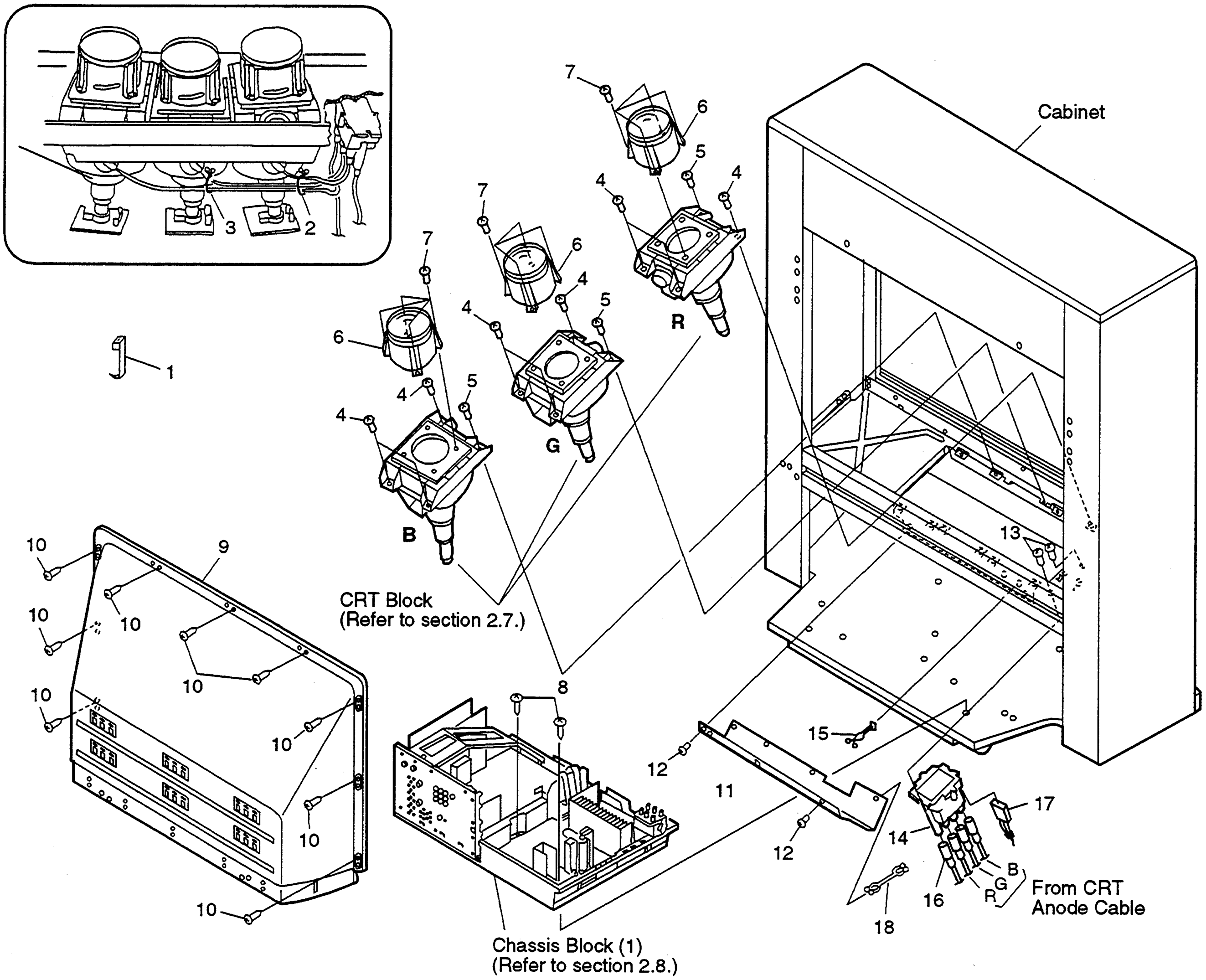
2.5 REAR VIEW (1)



Parts List

Mark	No.	Description	Part No.
	1	Rear Cover	AME2299
NSP	2	Back Cover Panel	AMM2772
NSP	3	Purse Lock	AEC1263
	4	Screw	ABA1240
	5	Screw	ABA1235
	6	Screw	ABA1149

2.6 REAR VIEW (2)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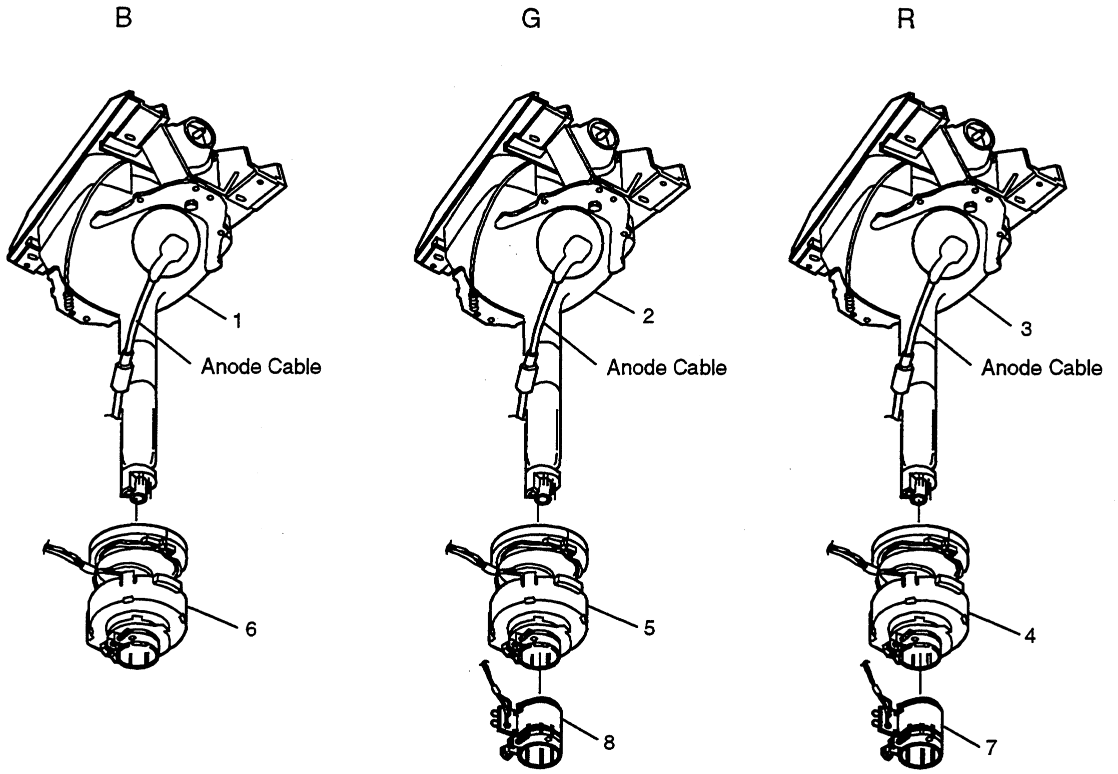
Cabinet
CRT Block
(Refer to section 2.7.)
Chassis Block (1)
(Refer to section 2.8.)
From CRT
Anode Cable

Parts List

Mark	No.	Description	Part No.
	1	Binder	AEC-093
	2	Purse Lock	AEC1540
NSP	3	Purse Lock S	AEC1261
	4	Screw	ABA1168
	5	Screw	FBT40P120FZK
☆	6	Lens Assy	AMR2833
	7	Screw	AMZ40P080FZK
	8	Screw	BYC40P350FZK
	9	Mirror Case	AME2298
	10	Screw	ABA1240
	11	Tray	AMR2936
	12	Screw	ABZ30P120FZK
	13	Screw	VPZ40P120FMC
NSP ⚠	14	HV Distributor	AXW1046
NSP	15	Lead Clamper	AEC1611
	16	HV Cable (J26)	ADY1032
	17	HV Return Wire (J27)	ADX2338
	18	Cable Clip	AEC1708

2.7 CRT BLOCK



(1) PARTS LIST

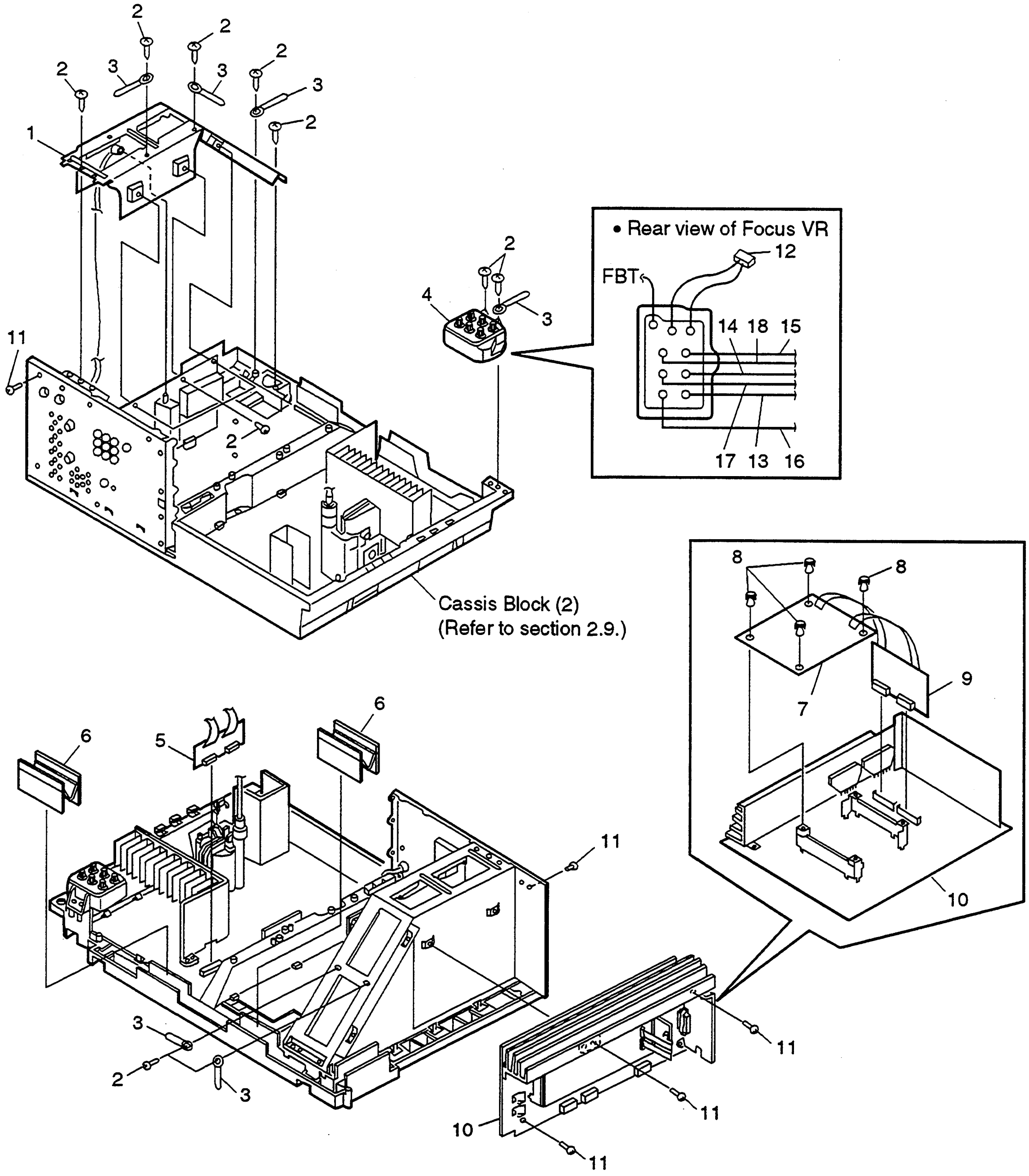
Mark	No.	Description	Part No.
☆	1	CRT Service Assy B	See Contrast table (2)
☆	2	CRT Service Assy G	AWY1388
☆	3	CRT Service Assy R	See Contrast table (2)
⚠	4	Deflection Yoke (L2)	ATL1130
⚠	5	Deflection Yoke (L3)	ATL1130
⚠	6	Deflection Yoke (L4)	ATL1130
⚠	7	VM Coil (L5)	ATL1133
⚠	8	VM Coil (L6)	ATL1133

(1) CONTRAST TABLE

SD-P50A3-K/KUXC and SD-P55A3-K/KUXC have the same construction except for the following :

Mark	No.	Symbol and Description	Part No.		Remarks
			SD-P50A3-K/KUXC	SD-P55A3-K/KUXC	
☆	1	CRT Service Assy B	AWY1389	AWY1391	
☆	3	CRT Service Assy R	AWY1387	AWY1390	

2.8 CHASSIS BLOCK (1)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• Rear view of Focus VR
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Cassis Block (2)
(Refer to section 2.9.)
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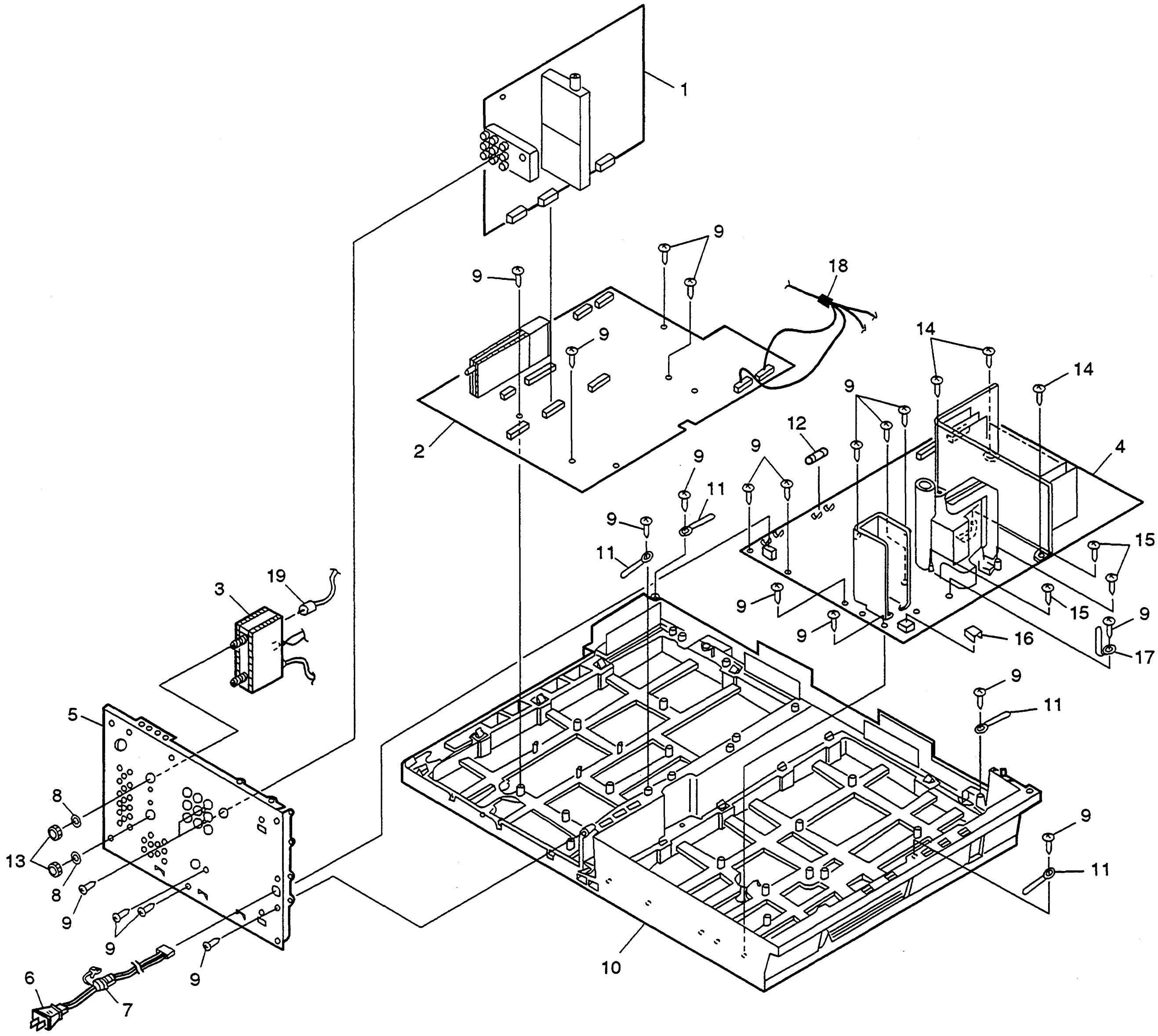
Parts List

Mark	No.	Description	Part No.
NSP	1	PCB Frame	ANG2141
	2	Screw	BBZ30P140FZK
	3	Binder	AEP-215
⚠	4	Focus VR (VR1)	ACX1096
	5	CONNECTOR A Assy	AWZ6189
	6	Wire Holder	AMR2832
	7	CONVER CONTROL Assy	AWZ6195
	8	Rivet	AEC-441
	9	CONNECTOR B Assy	AWZ6196
	10	AMP Assy	AWZ6190

Mark	No.	Description	Part No.
	11	Screw	ABZ30P120FZK
	12	4P Housing Wire (J11)	ADX2230
	13	1P Lead Wire (J4)	ADX2289
	14	1P Lead Wire (J5)	ADX2290
	15	1P Lead Wire (J6)	ADX2291
	16	1P Lead Wire (J7)	ADX2231
	17	1P Lead Wire (J8)	ADX2232
	18	1P Lead Wire (J9)	ADX2233

2.9 CHASSIS BLOCK (2)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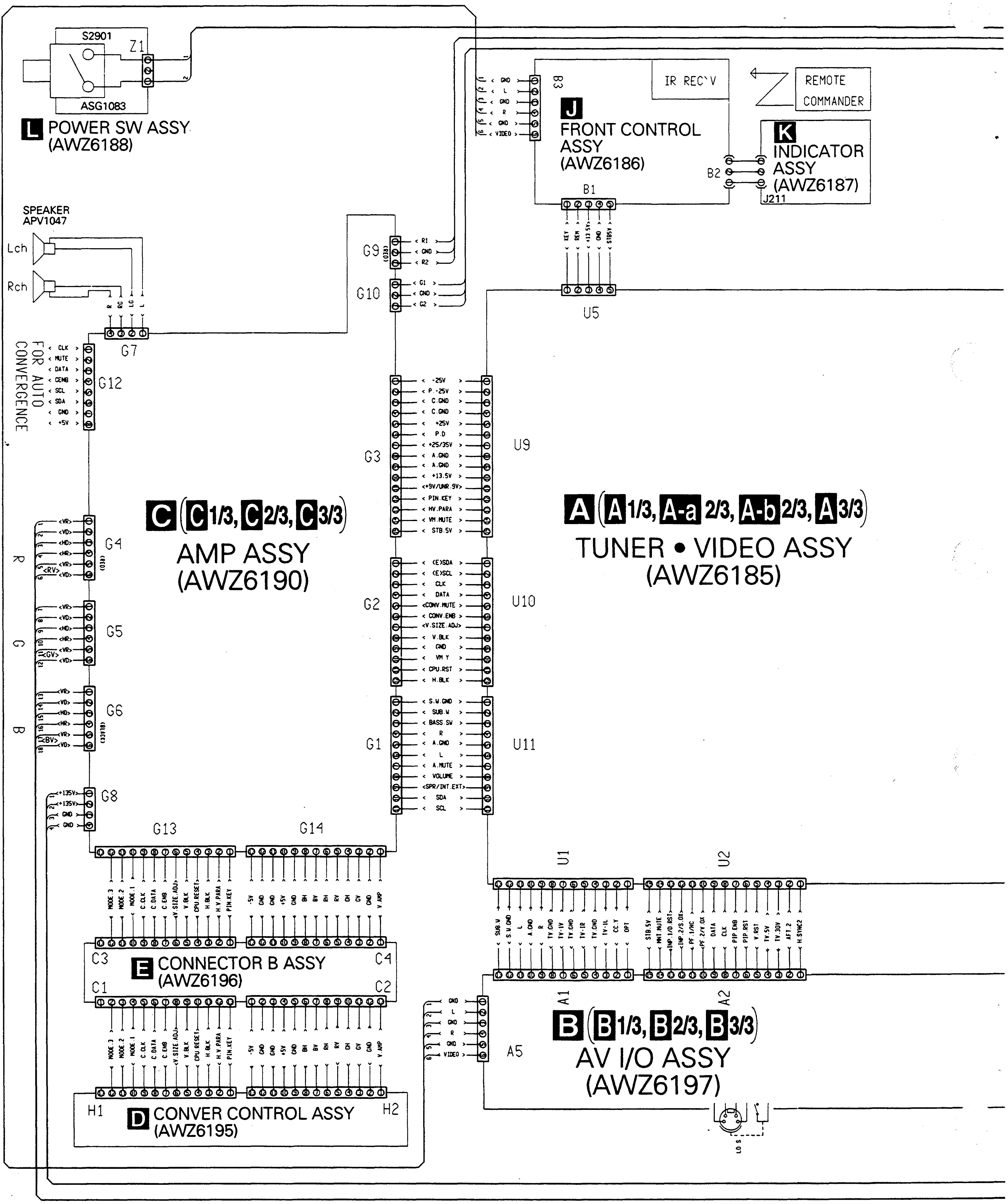
Parts List

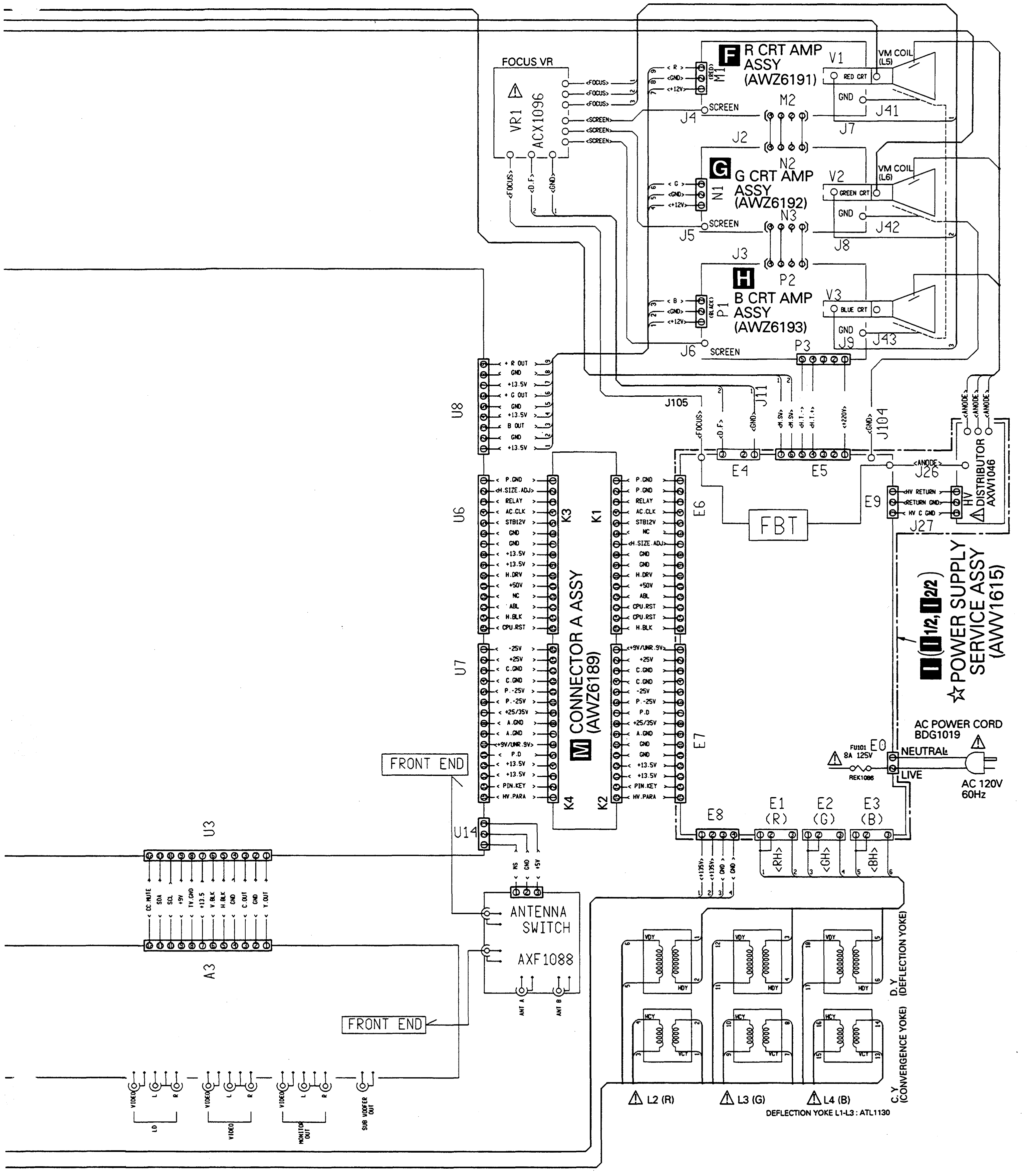
Mark	No.	Description	Part No.
	1	AV I/O Assy	AWZ6197
	2	TUNER • VIDEO Assy	AWZ6185
	3	RF Switch	AXF1088
☆	4	POWER SUPPLY SERVICE Assy	AWV1615
	5	Rear Panel	ANC2296
⚠	6	AC Power Cord	BDG1019
	7	Strain Relief	AEP-113
	8	Bushing	AEC1661
	9	Screw	BBZ30P140FZK
NSP	10	Chassis	AMA1011
	11	Binder	AEP-215
⚠	12	Fuse (FU102, 0.5A/125V)	AEK1010
	13	Nut	ABN-087
	14	Screw	ABZ30P120FZK
	15	Screw	VBZ30P200FMC
	16	Shield Case	ANK1510
	17	Binder	AEC-826
	18	Wire Harness (J8009)	ADX2288
	19	Coaxial Cable	ADE1165

3. SCHEMATIC DIAGRAM

3.1 OVERALL WIRING DIAGRAM


S2901
Z1
ASG1083
L POWER SW ASSY
(AWZ6188)
SPEAKER
APV1047
Lch
Rch
R
RG
LG
L
G7
FOR AUTO CONVERGENCE
CLK
MUTE
DATA
CENB
SCL
SDA
GND
+5V
G12
IR REC`V
REMOTE
COMMANDER
B3
GND
L
GND
R
GND
VIDEO
J FRONT CONTROL ASSY
(AWZ6186)
B2
B1
K INDICATOR ASSY
(AWZ6187)
J211
KEY
REM
+13.5V
GND
STBSV
U5
G9
R1
GND
R2
G10
G1
GND
G2
G3
-25V
P.-25V
C.GND
C.GND
+25V
P.D
+25/35V
A.GND
A.GND
+13.5V
+9V/UNR.9V
PIN.KEY
HV.PARA
VM.MUTE
STB.5V
U9
C (C1/3, C2/3, C3/3)
AMP ASSY
(AWZ6190)
A (A1/3, A-a 2/3, A-b 2/3, A3/3)
TUNER • VIDEO ASSY
(AWZ6185)
G4
R
VR
VD
HD
HR
VR
RV
VD
G5
G
GV
G6
B
BV
G8
+135V
+135V
GND
GND
G2
(E)SDA
(E)SCL
CLK
DATA
CONV.MUTE
CONV.ENB
V.SIZE.ADJ
V.BLK
GND
VM Y
CPU.RST
H.BLK
U10
G1
S.W.GND
SUB.W
BASS.SW
R
A.GND
L
A.MUTE
VOLUME
SPR/INT.EXT
SDA
SCL
U11
G13
G14
MODE.3
MODE.2
MODE.1
C.CLK
C.DATA
C.ENB
V.SIZE.ADJ
V.BLK
CPU.RESET
H.BLK
H.V.PARA
PIN.KEY
-5V
GND
+5V
GND
BH
BV
RH
RV
GH
GV
GND
V.AMP
C3
C4
C1
C2
E CONNECTOR B ASSY
(AWZ6196)
H1
H2
D CONVER CONTROL ASSY
(AWZ6195)
U1
U2
SUB.W
S.W.GND
L
A.GND
R
TV.GND
TV-1V
TV.GND
TV-1R
TV.GND
TV-1L
CC.Y
OPT
STB.5V
MNT.MUTE
INP.1/O.RST
INP.2/S.OX
PF.1/HC
PF.2/Y.OX
DATA
CLK
PIP.ENB
PIP.RST
V.RST
TV.5V
TV.30V
AFT.2
H.SYNC2
A1
A2
A5
GND
L
GND
R
GND
VIDEO
B (B1/3, B2/3, B3/3)
AV I/O ASSY
(AWZ6197)
LO S

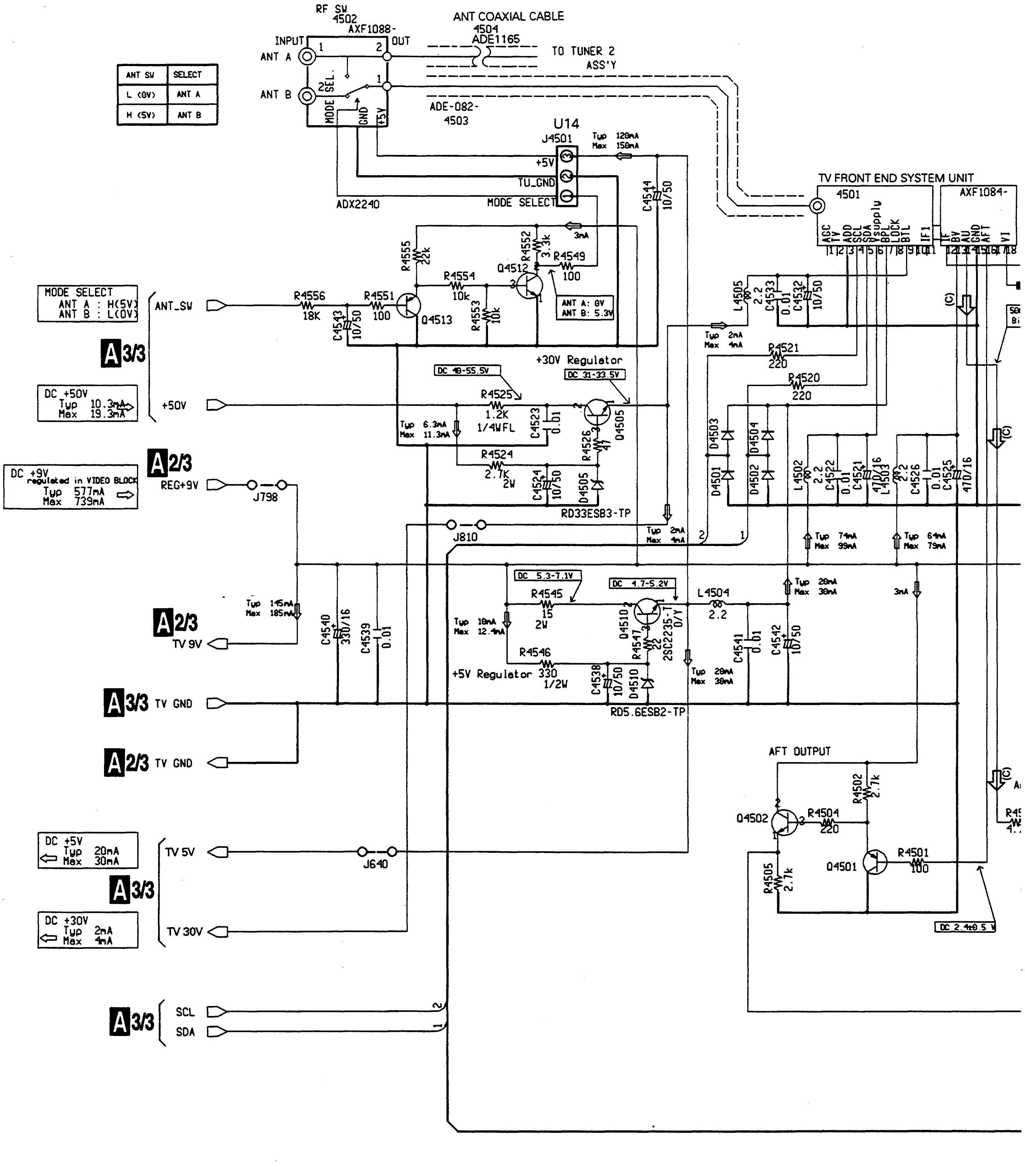
Note : When ordering service parts, be sure to refer to
"EXPLODED VIEWS AND PARTS LIST" or "PCB PARTS LIST"


FOCUS VR
VR1
ACX1096
<FOCUS>
<SCREEN>
<D.F.>
<GND>
F
R CRT AMP ASSY (AWZ6191)
M1
M2
V1
RED CRT
VM COIL (L5)
GND
J41
J7
J4
SCREEN
J2
N2
G
G CRT AMP ASSY (AWZ6192)
N1
V2
GREEN CRT
VM COIL (L6)
J42
J8
J5
N3
J3
H
P2
B CRT AMP ASSY (AWZ6193)
P1
V3
BLUE CRT
J43
J9
J6
P3
U8
+ R OUT
GND
+13.5V
+ G OUT
B OUT
J105
J11
J104
<ANODE>
E4
E5
J26
HV DISTRIBUTOR AXW1046
HV RETURN
RETURN GND
HV C GND
E9
J27
FBT
E6
U6
K3
K1
P.GND
H.SIZE.ADJ
RELAY
AC.CLK
STBI2V
NC
H.DRV
+50V
ABL
H.BLK
CPU.RST
M
CONNECTOR A ASSY (AWZ6189)
U7
K4
K2
E7
-25V
+25V
C.GND
P.-25V
+25/35V
A.GND
+9V/UNR.9V
P.D
PIN.KEY
HV.PARA
I
I 1/2, I 2/2
☆ POWER SUPPLY SERVICE ASSY (AWW1615)
AC POWER CORD BDG1019
FU101 8A 125V
REK1086
E0
NEUTRAL
LIVE
AC 120V 60Hz
FRONT END
U14
MS
GND
+5V
E8
E1 (R)
E2 (G)
E3 (B)
<RH>
<GH>
<BH>
+135V
U3
CC MUTE
SDA
SCL
+5V
TV.GND
+13.5
V.BLK
H.BLK
GND
C.OUT
Y.OUT
A3
ANTENNA SWITCH
AXF1088
ANT A
ANT B
FRONT END
VDY
HDY
HCY
VCY
D.Y (DEFLECTION YOKE)
C.Y (CONVERGENCE YOKE)
L2 (R)
L3 (G)
L4 (B)
DEFLECTION YOKE L1-L3 : ATL1130
VIDEO
L
R
LD
MONITOR OUT
SUB WOOFER OUT

3.2 TUNER•VIDEO ASSY (1/3)

A TUNER • VIDEO ASSY (1/3) (AWZ6185)

• TUNER BLOCK


RF SW
4502
AXF1088-
INPUT
OUT
ANT A
ANT B
SEL.
MODE
GND
+5V
ANT COAXIAL CABLE
4504
ADE1165
TO TUNER 2
ASS'Y
ADE-082-
4503
ANT SW
SELECT
L (0V)
ANT A
H (5V)
ANT B
U14
J4501
+5V
TU_GND
MODE SELECT
ADX2240
Typ 120mA
Max 150mA
C4544
10/50
TV FRONT END SYSTEM UNIT
4501
AXF1084-
AGC
TV
ADD
SCL
SDA
Vsupply
BPL
LOCK
BTL
IF1
IF
BV
AU
GND
AFT
V1
MODE SELECT
ANT A : H(5V)
ANT B : L(0V)
ANT_SW
R4556
18K
R4551
100
C4543
10/50
Q4513
R4555
22k
R4554
10k
R4553
10k
Q4512
R4552
3.3k
R4549
100
3mA
ANT A: 0V
ANT B: 5.3V
L4505
2.2
C4533
0.01
C4532
10/50
Typ 2mA
Max 4mA
R4521
220
R4520
220
A3/3
DC +50V
Typ 10.3mA
Max 19.3mA
+50V
+30V Regulator
DC 48-55.5V
DC 31-33.5V
R4525
1.2K
1/4WFL
C4523
0.01
Q4505
R4526
47
Typ 6.3mA
Max 11.3mA
R4524
2.7K
2W
C4524
10/50
D4505
RD33ESB3-TP
D4503
D4504
D4501
D4502
L4502
2.2
C4522
0.01
C4521
470/16
L4503
2.2
C4526
0.01
C4525
470/16
A2/3
DC +9V
regulated in VIDEO BLOCK
Typ 577mA
Max 739mA
REG+9V
J798
J810
Typ 2mA
Max 4mA
Typ 74mA
Max 99mA
Typ 64mA
Max 79mA
DC 5.3-7.1V
DC 4.7-5.2V
R4545
15
2W
Q4510
R4547
22
2SC2235-T
O/Y
L4504
2.2
Typ 20mA
Max 30mA
3mA
Typ 145mA
Max 185mA
A2/3
TV 9V
C4540
330/16
C4539
0.01
Typ 10mA
Max 12.4mA
R4546
330
1/2W
+5V Regulator
C4538
10/50
D4510
RD5.6ESB2-TP
Typ 20mA
Max 30mA
C4541
0.01
C4542
10/50
A3/3 TV GND
A2/3 TV GND
AFT OUTPUT
R4502
2.7k
Q4502
R4504
220
Q4501
R4501
100
R4505
2.7k
DC 2.4±0.5 V
DC +5V
Typ 20mA
Max 30mA
TV 5V
J640
A3/3
DC +30V
Typ 2mA
Max 4mA
TV 30V
A3/3
SCL
SDA
(C)

Notes

1.RESISTORS

Indicated in Ω

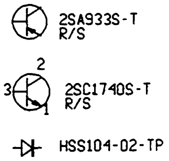
tolerance unless otherwise noted k Ω

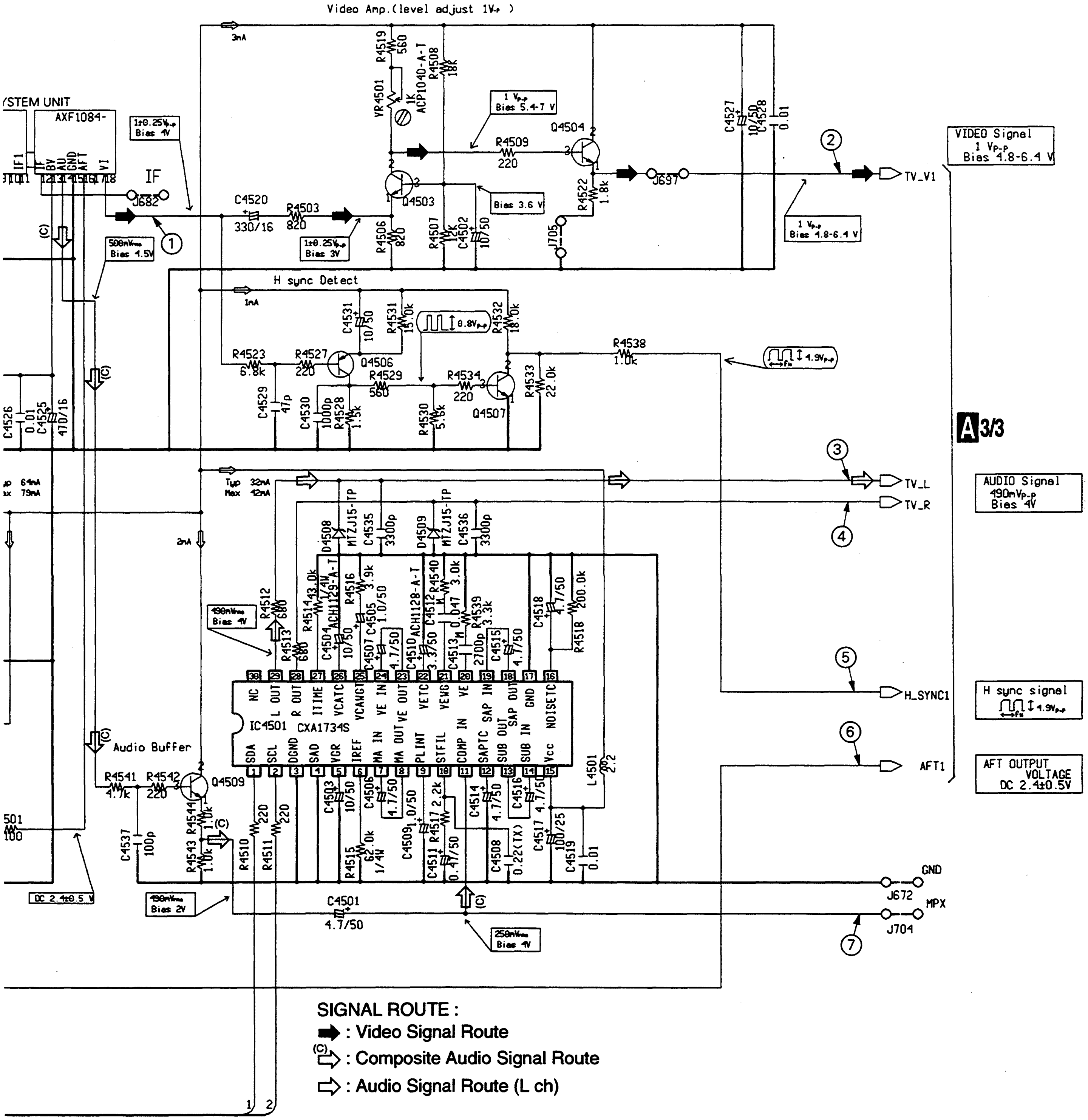
2.CAPASITORS

Indicated in capacity(uF)/Voltage unless

otherwise noted p pF

Indication without voltage is 50V except electrolytic capacitor.


2SA933S-T
R/S
2
3
1
2SC1740S-T
R/S
HSS104-02-TP


Video Amp.(level adjust 1Vp-p)
3mA
R4519
560
VR4501
1K
ACP1040-A-T
R4508
18K
/STEM UNIT
AXF1084-
IF1
IF
BV
AU
GND
AFT
VI
11
12
13
14
15
16
17
18
1±0.25Vp-p
Bias 4V
IF
J682
C4520
330/16
R4503
820
1 Vp-p
Bias 5.4-7 V
Q4504
R4509
220
Q4503
Bias 3.6 V
R4506
820
1±0.25Vp-p
Bias 3V
R4507
1.2k
C4502
10/50
J705
R4522
1.8k
J697
C4527
10/50
C4528
0.01
1 Vp-p
Bias 4.8-6.4 V
TV_V1
VIDEO Signal
1 Vp-p
Bias 4.8-6.4 V
500mVrms
Bias 4.5V
H sync Detect
1mA
C4531
10/50
R4531
15.0k
0.8Vp-p
R4532
18.0k
R4523
6.8k
R4527
220
Q4506
R4529
560
R4534
220
Q4507
R4533
22.0k
R4538
1.0k
4.9Vp-p
fH
C4529
47p
C4530
1000p
R4528
1.5k
R4530
5.6k
C4526
0.01
C4525
470/16
A3/3
Typ 64mA
Max 79mA
Typ 32mA
Max 42mA
2mA
TV_L
TV_R
AUDIO Signal
490mVp-p
Bias 4V
D4508
MTZJ15-TP
C4535
3300p
D4509
MTZJ15-TP
C4536
3300p
490mVrms
Bias 4V
R4512
680
R4513
680
R4514 43.0k 1/4W
ACH1129-A-T
C4504 10/50
R4516 3.9k
C4505 1.0/50
C4507 4.7/50
ACH1128-A-T
C4510 3.3/50
C4512
R4540 3.0k
0.047
C4513 2700p
R4539 3.3k
C4515 4.7/50
C4518 4.7/50
R4518 200.0k
30 NC
29 L OUT
28 R OUT
27 ITIME
26 VCATC
25 VCAWGT
24 VE IN
23 VE OUT
22 VETC
21 VEWG
20 VE
19 SAP IN
18 SAP OUT
17 GND
16 NOISETC
IC4501 CXA1734S
1 SDA
2 SCL
3 DGND
4 SAD
5 VGR
6 IREF
7 MA IN
8 MA OUT
9 PLINT
10 STFIL
11 COMP IN
12 SAPTC
13 SUB OUT
14 SUB IN
15 Vcc
H_SYNC1
H sync signal
4.9Vp-p
fH
AFT1
AFT OUTPUT
VOLTAGE
DC 2.4±0.5V
Audio Buffer
R4541
4.7k
R4542
220
Q4509
R4544
1.0k
R4543
1.0k
C4537
100p
R4510
220
R4511
220
C4503 10/50
R4515 62.0k 1/4W
C4506 4.7/50
C4509 1.0/50
C4511 0.47/50
R4517 2.2k
C4514 4.7/50
C4508 0.22(TX)
C4516 4.7/50
C4517 100/25
C4519 0.01
L4501 22
501
100
DC 2.4±0.5 V
490mVrms
Bias 2V
C4501
4.7/50
250mVrms
Bias 4V
GND
J672
MPX
J704
(C)
①
②
③
④
⑤
⑥
⑦
1
2

SIGNAL ROUTE :

➡ : Video Signal Route

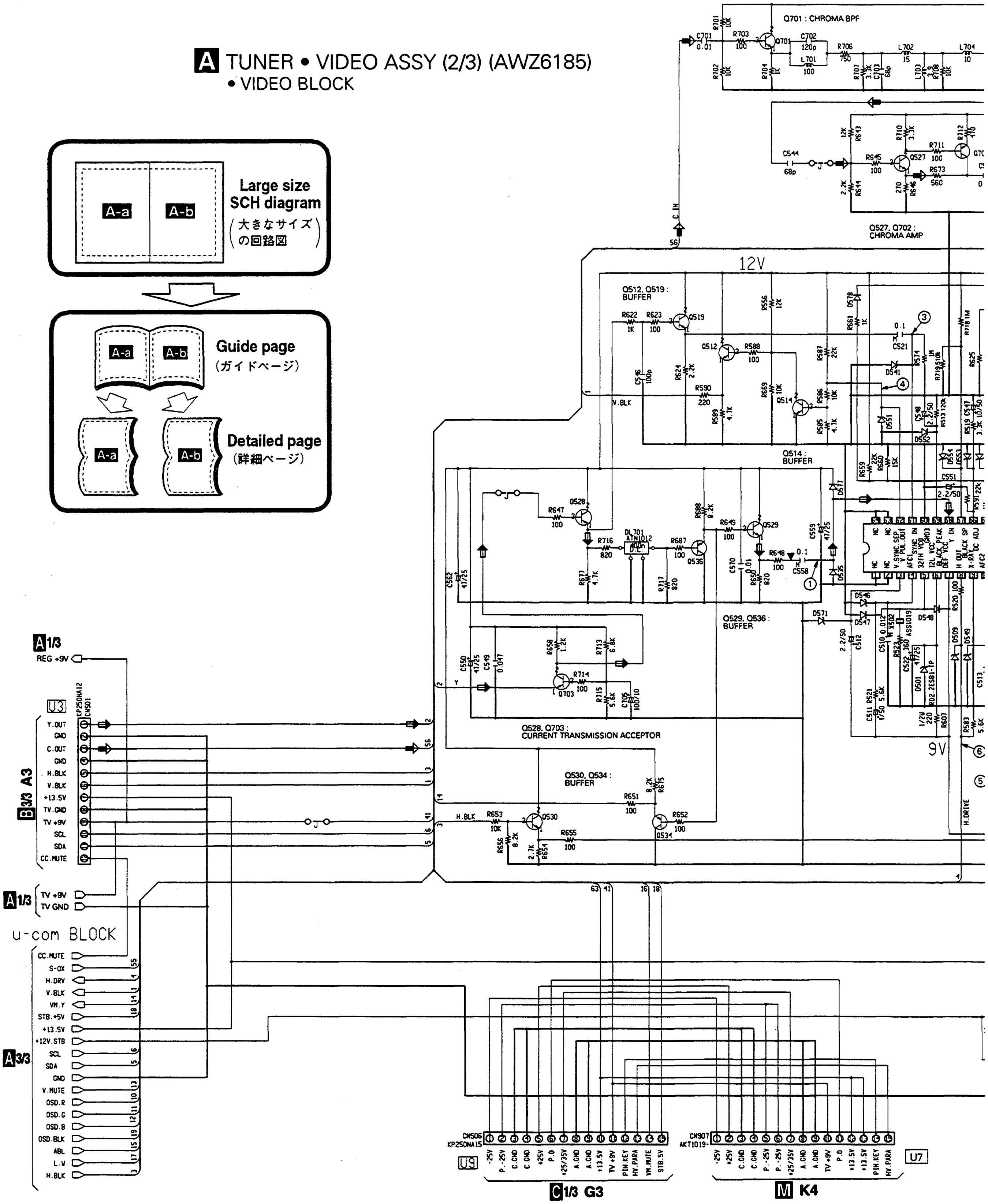
(C)⇨ : Composite Audio Signal Route

⇨ : Audio Signal Route (L ch)

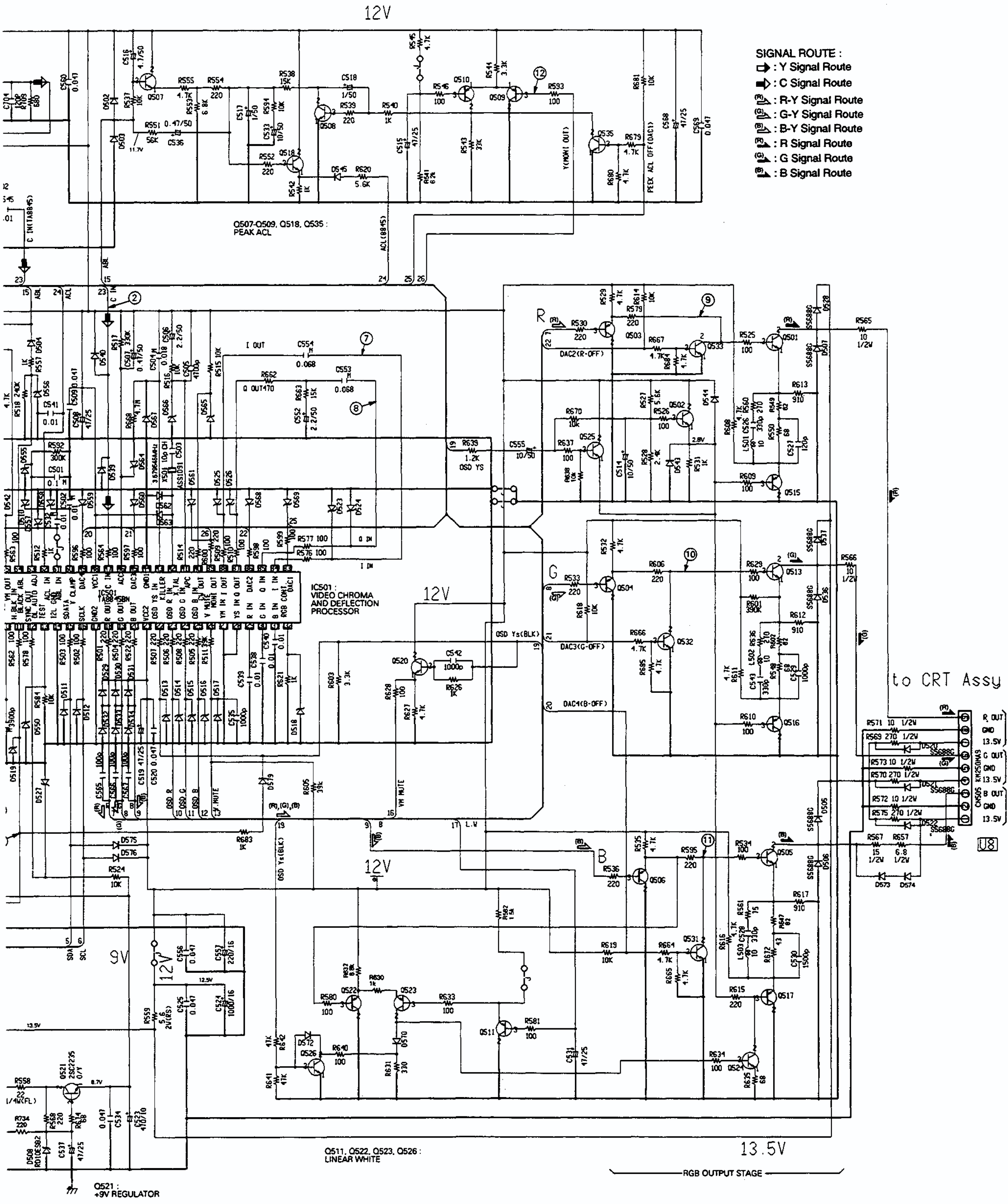
3.3 TUNER•VIDEO ASSY (2/3)

A-a

A TUNER • VIDEO ASSY (2/3) (AWZ6185)
• VIDEO BLOCK


Large size SCH diagram
（大きなサイズの回路図）
Guide page
（ガイドページ）
Detailed page
（詳細ページ）
A-a
A-b
Q701 : CHROMA BPF
Q527, Q702 : CHROMA AMP
C IN
12V
Q512, Q519 : BUFFER
Q514 : BUFFER
Q528 : Q703 : CURRENT TRANSMISSION ACCEPTOR
Q529, Q536 : BUFFER
Q530, Q534 : BUFFER
DL701 ATN1012
V.BLK
H.BLK
Y
9V
H.DRIVE
A1/3
REG +9V
U3
KP250NA12 CN501
Y.OUT
GND
C.OUT
GND
H.BLK
V.BLK
+13.5V
TV.GND
TV +9V
SCL
SDA
CC.MUTE
B3/3 A3
A1/3
TV +9V
TV GND
u-com BLOCK
CC.MUTE
S-OX
H.DRV
V.BLK
VM.Y
STB.+5V
+13.5V
+12V.STB
SCL
SDA
GND
V.MUTE
OSD.R
OSD.G
OSD.B
OSD.BLK
ABL
L.V.
H.BLK
A3/3
CN506 KP250NA15
U9
-25V
P.-25V
C.GND
C.GND
+25V
P.D
+25/35V
A.GND
A.GND
TV +9V
PIN.KEY
HV.PARA
VM.MUTE
STB.5V
C1/3 G3
CN907 AKT1019
-25V
+25V
C.GND
P.-25V
P.-25V
+25/35V
A.GND
TV +9V
P.D
+13.5V
+13.5V
PIN.KEY
HV.PARA
U7
M K4

A-b

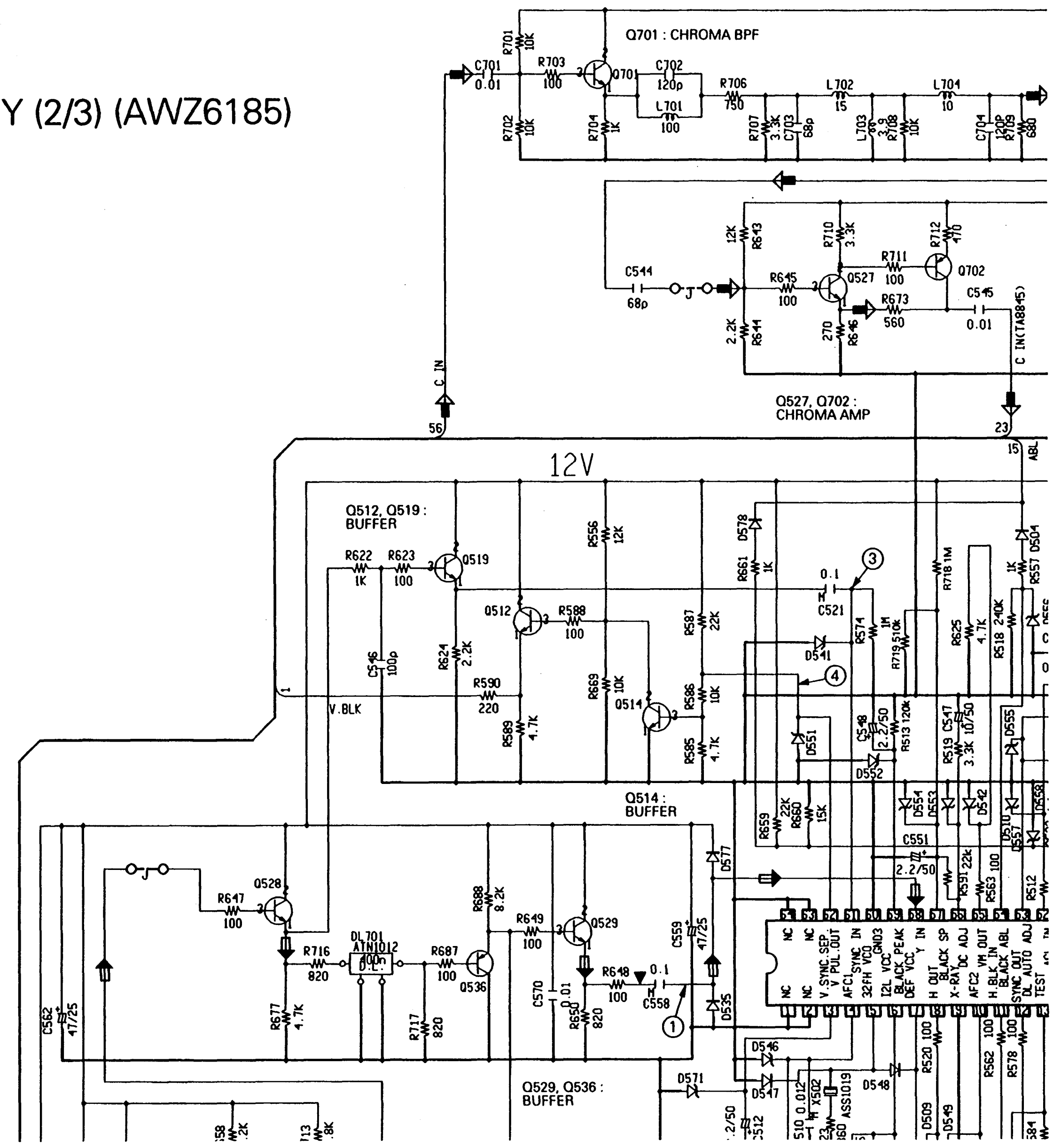

12V
SIGNAL ROUTE :
⇨ : Y Signal Route
➡ : C Signal Route
(R-Y) : R-Y Signal Route
(G-Y) : G-Y Signal Route
(B-Y) : B-Y Signal Route
(R) : R Signal Route
(G) : G Signal Route
(B) : B Signal Route
Q507-Q509, Q518, Q535 :
PEAK ACL
IC501 :
VIDEO CHROMA
AND DEFLECTION
PROCESSOR
12V
to CRT Assy
R OUT
GND
13.5V
G OUT
GND
13.5V
B OUT
GND
13.5V
F
M1
G
N1
H
P1
U8
12V
9V
12V
13.5V
RGB OUTPUT STAGE
Q511, Q522, Q523, Q526 :
LINEAR WHITE
Q521 :
+9V REGULATOR

1.RESISTERS indicated in 1/2W.1/4W.1WFL.2WFL 5%
tolerance unless otherwise noted K;KΩ, M;MΩ
(F)+1% , (G)+2% , (K)+10% , (M)+20% tolerance
2.CAPACITORS indicated in capasity (F)/(V) unless otherwise noted pF
indicated without voltage is 50V except electrolytic capacitor

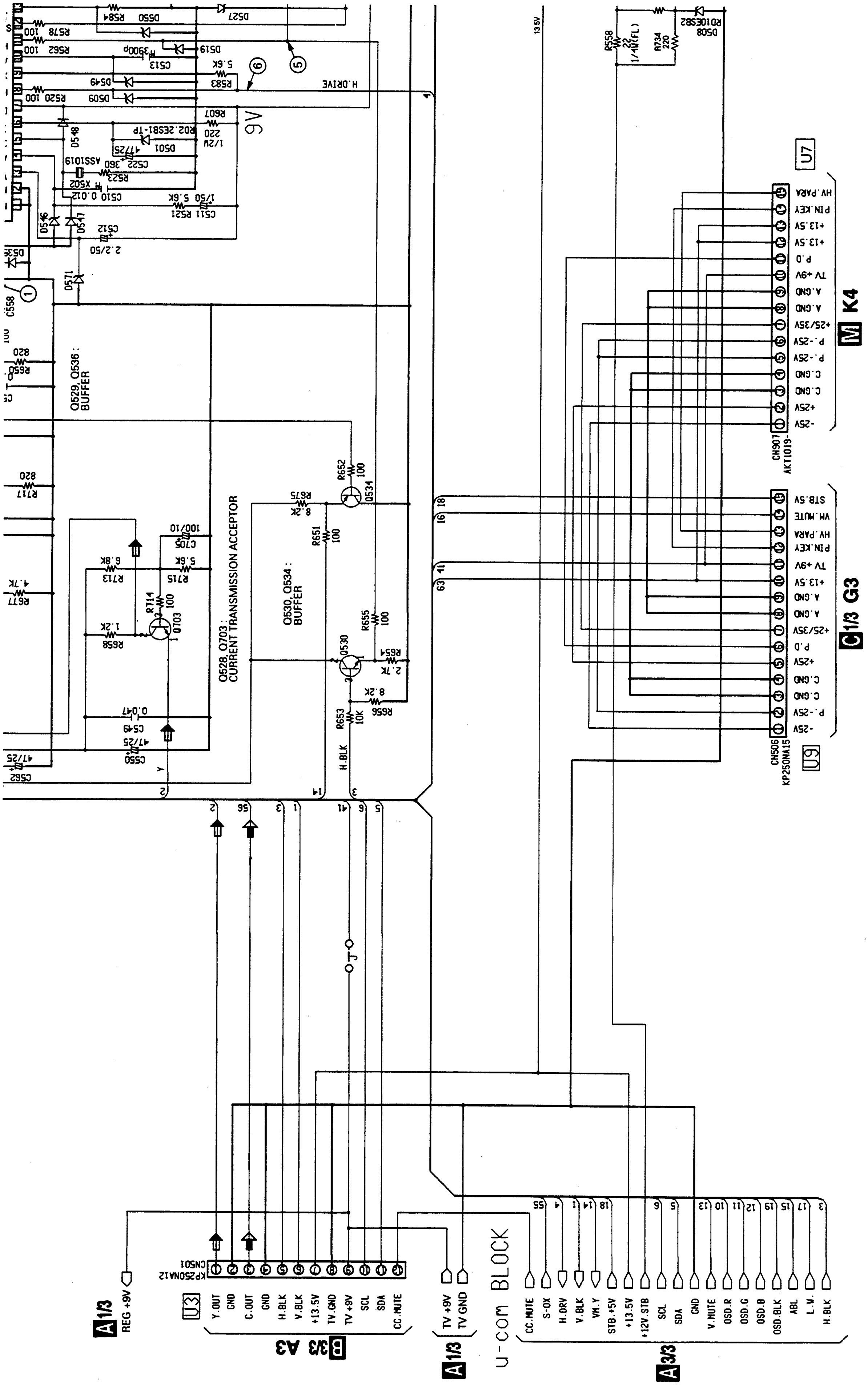
NOTE:
HSS104-02 2SA933S
MTZJ15 2SC1740S

A TUNER • VIDEO ASSY (2/3) (AWZ6185)

• VIDEO BLOCK

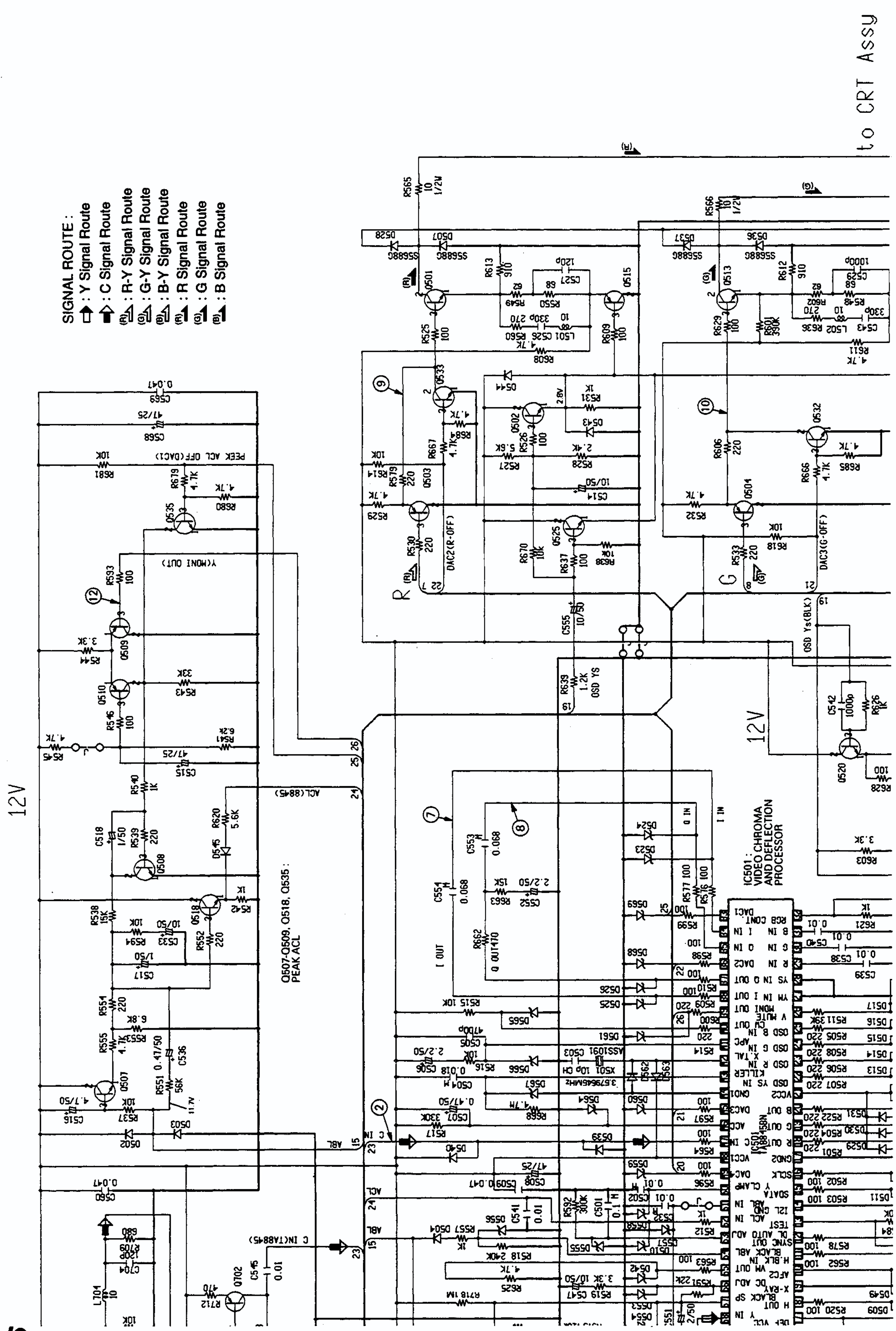

Q701 : CHROMA BPF
R701 10K
C701 0.01
R703 100
Q701
C702 120p
R706 750
L702 15
L704 10
R702 10K
R704 1K
L701 100
R707 3.3K
C703 68p
L703 3.9
R708 10K
C704 120P
R709 680
R643 12K
R710 3.3K
R712 470
R711 100
Q702
C544 68p
R645 100
Q527
R673 560
C545 0.01
R644 2.2K
R646 270
C IN(TA8845)
Q527, Q702 : CHROMA AMP
C IN
56
23
15
ABL
12V
Q512, Q519 : BUFFER
R622 1K
R623 100
Q519
R556 12K
D578
R661 1K
C521 0.1
③
R718 1M
D504
R557 1K
Q512
R588 100
R587 22K
R574 1M
R719 510K
R625 4.7K
R518 240K
C546 100p
R624 2.2K
R669 10K
R586 10K
D541
④
V.BLK
R590 220
R589 4.7K
Q514
R585 4.7K
D551
C548 2.2/50
R513 120K
R519 3.3K
C547 10/50
D555
D552
Q514 : BUFFER
R659 22K
R660 15K
D554
D553
D542
D510
D557
D558
C551 2.2/50
R591 22K
R563 100
R512
Q528
R647 100
R716 820
DL701 ATN1012
R688 8.2K
R687 100
Q536
R649 100
Q529
C559 47/25
D577
D535
R648 100
C558 0.1
①
C570 0.01
R650 820
C562 47/25
R677 4.7K
R717 820
Q529, Q536 : BUFFER
D546
D547
D571
C512 2.2/50
C510 0.012
X502
ASS1019
D548
R520 100
D509
D549
R562 100
R578 100
NC
NC
V.SYNC.SEP
V PUL.OUT
AFC1
SYNC IN
32FH VCO
GND3
I2L VCC
BLACK PEAK
DEF VCC
Y IN
H OUT
BLACK SP
X-RAY
DC ADJ
AFC2
VM OUT
H.BLK IN
BLACK ABL
SYNC OUT
DL AUTO ADJ
TEST
J
1

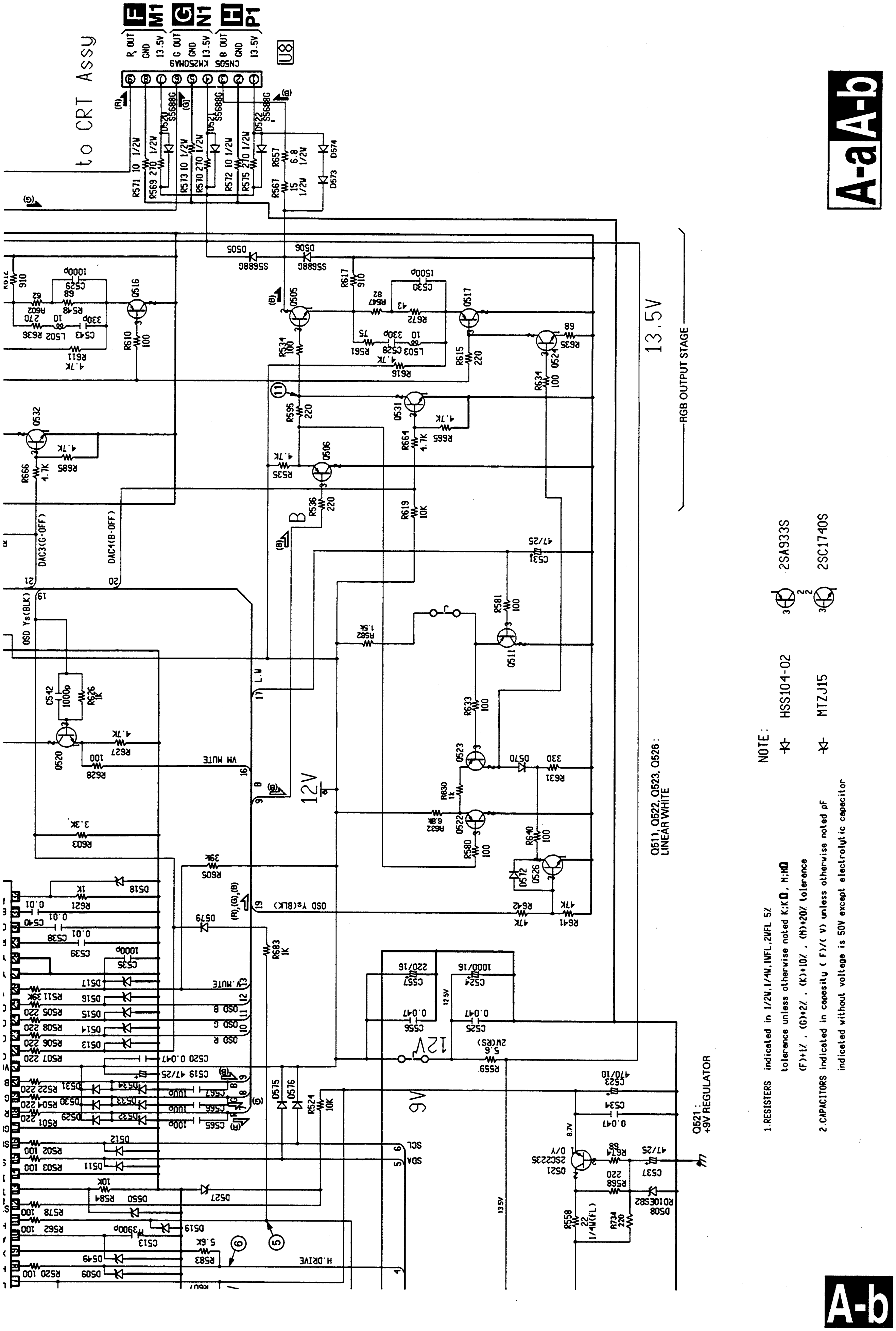
A-aA-b


CN506 KP250NA15
U9
C1/3 G3
-25V
P.-25V
C.GND
C.GND
+25V
P.D
+25/35V
A.GND
A.GND
+13.5V
TV +9V
PIN.KEY
HV.PARA
VM.MUTE
STB.5V
CN907 AKT1019-
U7
M K4
-25V
+25V
C.GND
C.GND
P.-25V
P.-25V
+25/35V
A.GND
A.GND
TV +9V
P.D
+13.5V
+13.5V
PIN.KEY
HV.PARA
R558 22 1/4W(FL)
R734 220
D508 RD10ES82
13.5V
H.DRIVE
9V
R607 220 1/2W
R02.2ES81-TP
D501
C522 47/25
360
ASS1019
R523
X502
C510 0.012
C511 R521 1/50 5.6K
C512 2.2/50
D571
D546
D547
D548
D509
D549
R520 100
R583 5.6K
C513 3900p
D519
R562 100
R578 100
D550 R584
D527
Q529, Q536 : BUFFER
R650 820
R717 820
R677 4.7K
C562 47/25
C550 47/25
C549 47/25
0.047
R658 1.2K
Q703
R714 100
R713 6.8K
R715 5.6K
C705 100/10
Q528, Q703 : CURRENT TRANSMISSION ACCEPTOR
Q530, Q534 : BUFFER
R675 8.2K
R652 100
Q534
R651 100
R655 100
Q530
R654 2.7K
R656 8.2K
R653 10K
H.BLK
Y
J
A1/3 REG +9V
U3
KP250NA12 CN501
Y.OUT
GND
C.OUT
GND
H.BLK
V.BLK
+13.5V
TV.GND
TV +9V
SCL
SDA
CC.MUTE
B3/3 A3
A1/3
TV +9V
TV GND
u-com BLOCK
A3/3
CC.MUTE
S-OX
H.DRV
V.BLK
VM.Y
STB.+5V
+13.5V
+12V.STB
SCL
SDA
GND
V.MUTE
OSD.R
OSD.G
OSD.B
OSD.BLK
ABL
L.W.
H.BLK

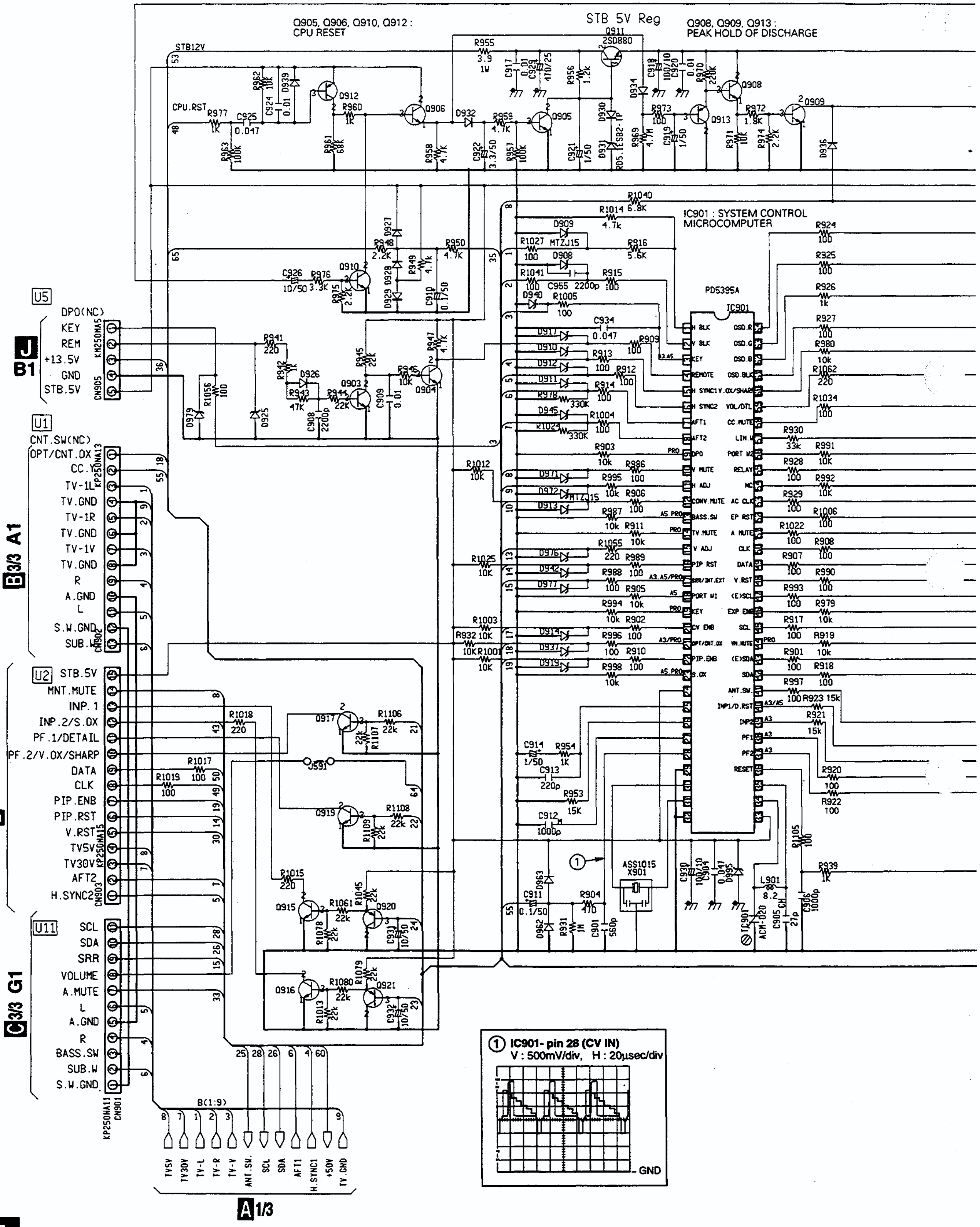
A-a A-b

SIGNAL ROUTE :
- ⇧ : Y Signal Route
- ⇧ : C Signal Route
- (R) : R-Y Signal Route
- (G) : G-Y Signal Route
- (B) : B-Y Signal Route
- (R) : R Signal Route
- (G) : G Signal Route
- (B) : B Signal Route

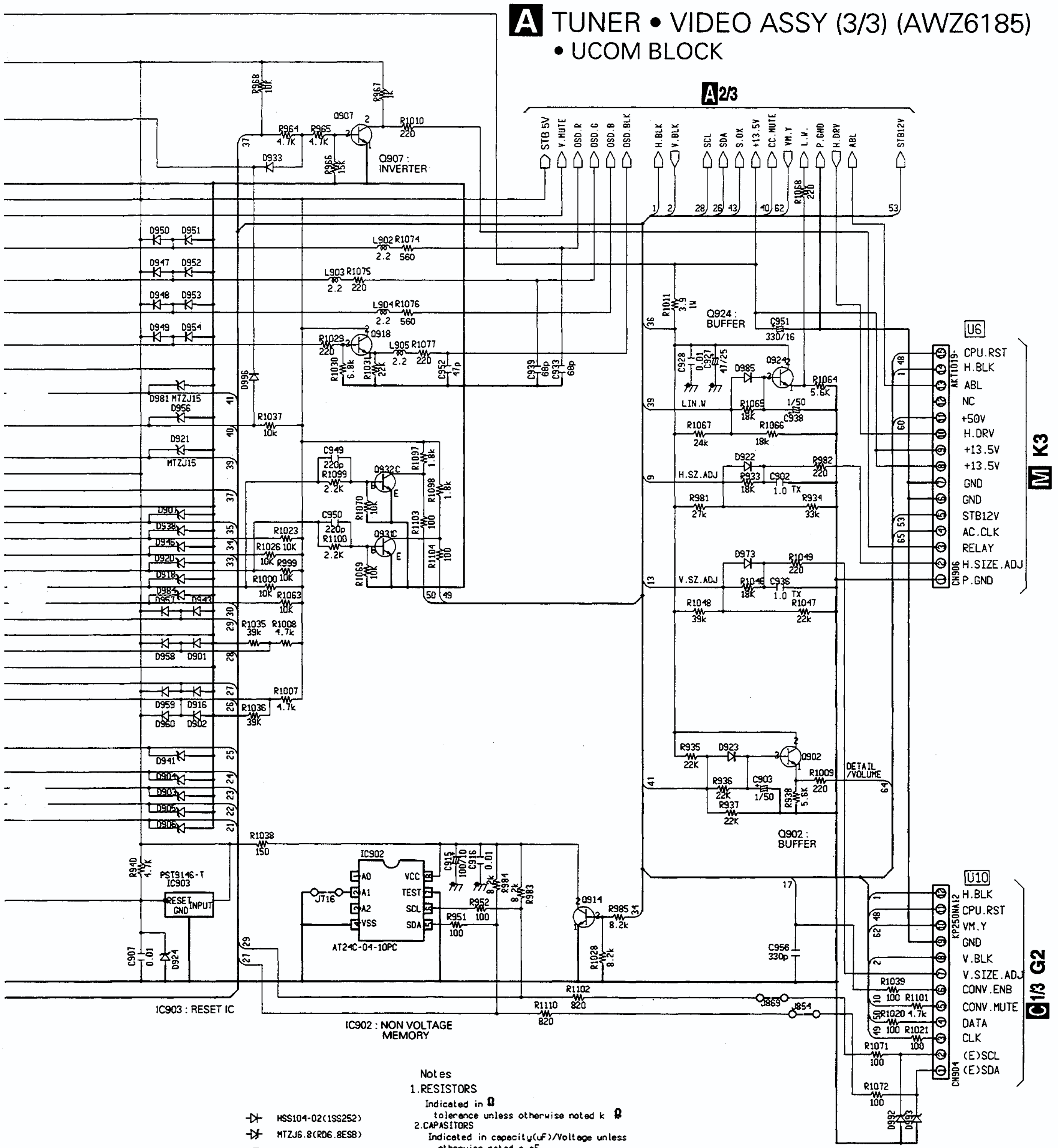

to CRT Assy
IC501 : VIDEO CHROMA AND DEFLECTION PROCESSOR
Q507-Q509, Q518, Q535 : PEAK ACL
12V
12V
R
G
DAC2(R-OFF)
DAC3(G-OFF)
OSD YS(BLK)
OSD YS
PEEK ACL OFF(DAC1)
Y(MONI OUT)
ACL(8845)
C IN(TA8845)
ACL
ABL
C IN
I IN
Q IN
I OUT
Q OUT
3.579545MHz
Q501
Q502
Q503
Q504
Q513
Q515
Q520
Q525
Q532
Q533
Q535
Q507
Q508
Q509
Q510
Q518
Q702


A-a
A-b
to CRT Assy
CN505 KM250MA9
R, OUT
GND
13.5V
G OUT
GND
13.5V
B OUT
GND
13.5V
U8
F M1
G N1
H P1
13.5V
RGB OUTPUT STAGE
12V
9V
OSD Ys(BLK)
DAC3(G-OFF)
DAC4(B-OFF)
VM MUTE
V.MUTE
OSD B
OSD G
OSD R
H.DRIVE
SCL
SDA
Q511, Q522, Q523, Q526 :
LINEAR WHITE
Q521 :
+9V REGULATOR
NOTE :
HSS104-02
MTZJ15
2SA933S
2SC1740S
1.RESISTERS indicated in 1/2W,1/4W,1WFL,2WFL 5%
tolerance unless otherwise noted K:kΩ, M:MΩ
(F)±1%, (G)±2%, (K)±10%, (M)±20% tolerance
2.CAPACITORS indicated in capacity (F)/(V) unless otherwise noted pF
indicated without voltage is 50V except electrolytic capacitor

3.4 TUNER•VIDEO ASSY (3/3)


Q905, Q906, Q910, Q912 :
CPU RESET
STB 5V Reg
Q911
2SD880
Q908, Q909, Q913 :
PEAK HOLD OF DISCHARGE
STB12V
CPU.RST
IC901 : SYSTEM CONTROL
MICROCOMPUTER
PD5395A
IC901
U5
DPO(NC)
KEY
REM
+13.5V
GND
STB.5V
J
B1
CN905
KM250MA5
U1
CNT.SW(NC)
OPT/CNT.OX
CC.Y
TV-1L
TV.GND
TV-1R
TV.GND
TV-1V
TV.GND
R
A.GND
L
S.W.GND
SUB.W
B3/3 A1
CN902
KP250NA13
U2
STB.5V
MNT.MUTE
INP.1
INP.2/S.OX
PF.1/DETAIL
PF.2/V.OX/SHARP
DATA
CLK
PIP.ENB
PIP.RST
V.RST
TV5V
TV30V
AFT2
H.SYNC2
B3/3 A2
CN903
KP250NA15
U11
SCL
SDA
SRR
VOLUME
A.MUTE
L
A.GND
R
BASS.SW
SUB.W
S.W.GND
C3/3 G1
KP250NA11
CN901
B(1:9)
TV5V
TV30V
TV-L
TV-R
TV-V
ANT.SW.
SCL
SDA
AFT1
H.SYNC1
+50V
TV.GND
A1/3
ASS1015
X901
L901
①
① IC901- pin 28 (CV IN)
V : 500mV/div, H : 20µsec/div
GND

A TUNER • VIDEO ASSY (3/3) (AWZ6185)
• UCOM BLOCK


A2/3
STB 5V
V.MUTE
OSD.R
OSD.G
OSD.B
OSD.BLK
H.BLK
V.BLK
SCL
SDA
S.OX
+13.5V
CC.MUTE
VM.Y
L.W.
P.GND
H.DRV
ABL
STB12V
Q907
Q907 : INVERTER
R968 10K
R967 1K
R964 4.7K
R965 4.7K
R966 15K
R1010 220
D933
D950
D951
D947
D952
D948
D953
D949
D954
D981 MTZJ15
D956
D921
MTZJ15
D996
L902 R1074 2.2 560
L903 R1075 2.2 220
L904 R1076 2.2 560
L905 R1077 2.2 220
R1029 220
Q918
R1030 6.8k
R1031 22K
C952 47p
C939 68p
C933 68p
R1037 10k
C949 220p
R1099 2.2K
Q932
R1097 1.8k
R1098 1.8k
C950 220p
R1100 2.2K
Q931
R1070 10K
R1103 100
R1104 100
R1069 10K
R1023
R1026 10K
R999 10K
R1000 10K
R1063 10K
R1035 39k
R1008 4.7k
R1007 4.7k
R1036 39K
D901
D938
D946
D920
D918
D984
D957
D943
D958
D901
D959
D916
D960
D902
D941
D904
D903
D905
D906
R1038 150
R940 4.7K
PST9146-T
IC903
RESET
GND
INPUT
C907 0.01
D924
IC903 : RESET IC
IC902
AT24C-04-10PC
A0
A1
A2
VSS
VCC
TEST
SCL
SDA
J716
C915 100/10
C916 0.01
R984 8.2K
R983 8.2K
R952 100
R951 100
IC902 : NON VOLTAGE MEMORY
Q914
R985 8.2k
R1028 8.2k
R1102 820
R1110 820
J869
J854
R1068 220
R1011 3.9 1W
Q924 : BUFFER
C951 330/16
C928 0.01
C927 47/25
D985
Q924
R1064 5.6K
LIN.W
R1065 18K
C938 1/50
R1067 24K
R1066 18K
H.SZ.ADJ
D922
R933 18K
C902 1.0 TX
R982 220
R981 27K
R934 33K
V.SZ.ADJ
D973
R1049 220
R1046 18K
C936 1.0 TX
R1048 39K
R1047 22K
R935 22K
D923
Q902
R936 22K
C903 1/50
R937 22K
R938 5.6K
R1009 220
DETAIL /VOLUME
Q902 : BUFFER
C956 330p
U6
CPU.RST
H.BLK
ABL
NC
+50V
H.DRV
+13.5V
+13.5V
GND
GND
STB12V
AC.CLK
RELAY
H.SIZE.ADJ
P.GND
AKT1019-
CN906
M K3
U10
H.BLK
CPU.RST
VM.Y
GND
V.BLK
V.SIZE.ADJ
CONV.ENB
CONV.MUTE
DATA
CLK
(E)SCL
(E)SDA
KP250NA12
CN904
C 1/3 G2
R1039 100
R1101 100
R1020 4.7k
R1021 100
R1071 100
R1072 100
D992
D993

Notes
1.RESISTORS
Indicated in Ω
tolerance unless otherwise noted k Ω
2.CAPASITORS
Indicated in capacity(uF)/Voltage unless
otherwise noted p pF
Indication without voltage is 50V except electrolytic capacitor.

HSS104-02(1SS252)
MTZJ6.8(RD6.8ESB)
2SC1740S
2SA933S

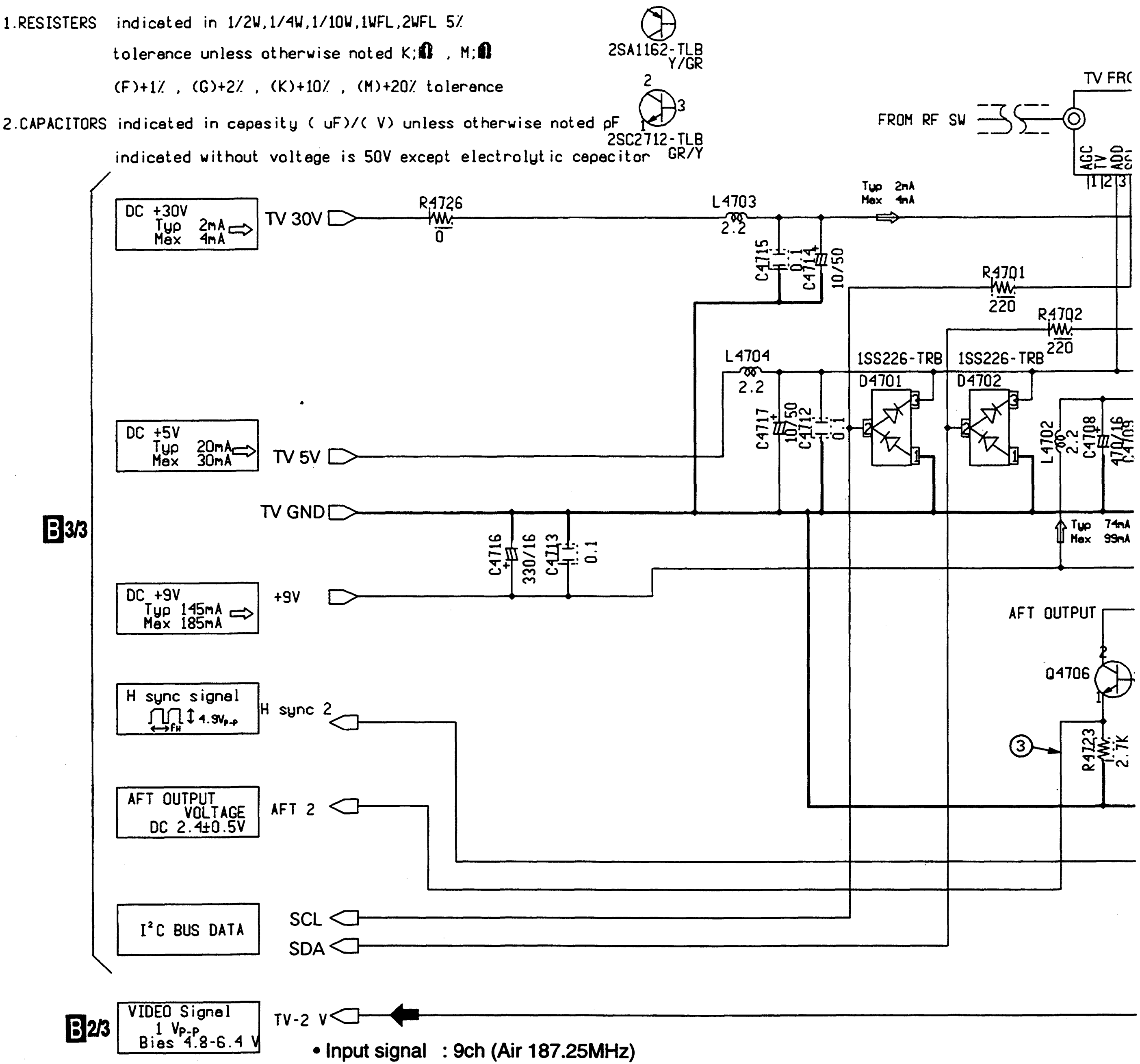
3.5 AV I/O ASSY (1/3)

B AV I/O ASSY (1/3) (AWZ6197)

• TUNER 2 BLOCK

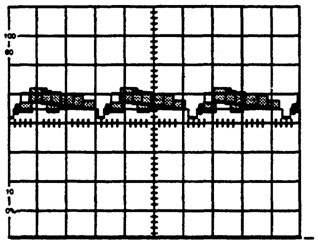
1.RESISTERS indicated in 1/2W,1/4W,1/10W,1WFL,2WFL 5% tolerance unless otherwise noted K;kΩ , M;MΩ
(F)+1% , (G)+2% , (K)+10% , (M)+20% tolerance

2.CAPACITORS indicated in capasity (uF)/(V) unless otherwise noted pF indicated without voltage is 50V except electrolytic capacitor

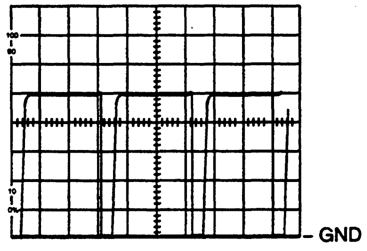

2SA1162-TLB
Y/GR
2
3
1
2SC2712-TLB
GR/Y
TV FRC
FROM RF SW
AGC
TV
ADD
1
2
3
DC +30V
Typ 2mA
Max 4mA
TV 30V
R4726
0
L4703
2.2
Typ 2mA
Max 4mA
C4715
0.1
C4714
10/50
R4701
220
R4702
220
L4704
2.2
1SS226-TRB
D4701
1SS226-TRB
D4702
DC +5V
Typ 20mA
Max 30mA
TV 5V
C4717
10/50
C4712
0.1
L4702
2.2
C4708
470/16
C4709
TV GND
B3/3
C4716
330/16
C4713
0.1
Typ 74mA
Max 99mA
DC +9V
Typ 145mA
Max 185mA
+9V
AFT OUTPUT
Q4706
H sync signal
4.9Vp-p
fH
H sync 2
③
R4723
2.7K
AFT OUTPUT
VOLTAGE
DC 2.4±0.5V
AFT 2
I²C BUS DATA
SCL
SDA
B2/3
VIDEO Signal
1 Vp-p
Bias 4.8-6.4 V
TV-2 V

- Input signal : 9ch (Air 187.25MHz)
- Video signal : Color bar (87.5% Mod., 1kHZ ± 25kHz dev.), 60dBµ input
- Range : DC range (Unless otherwise noted)

① TV FRONT END pin 18 (VI)
V : 1V/div, H : 20µsec/div



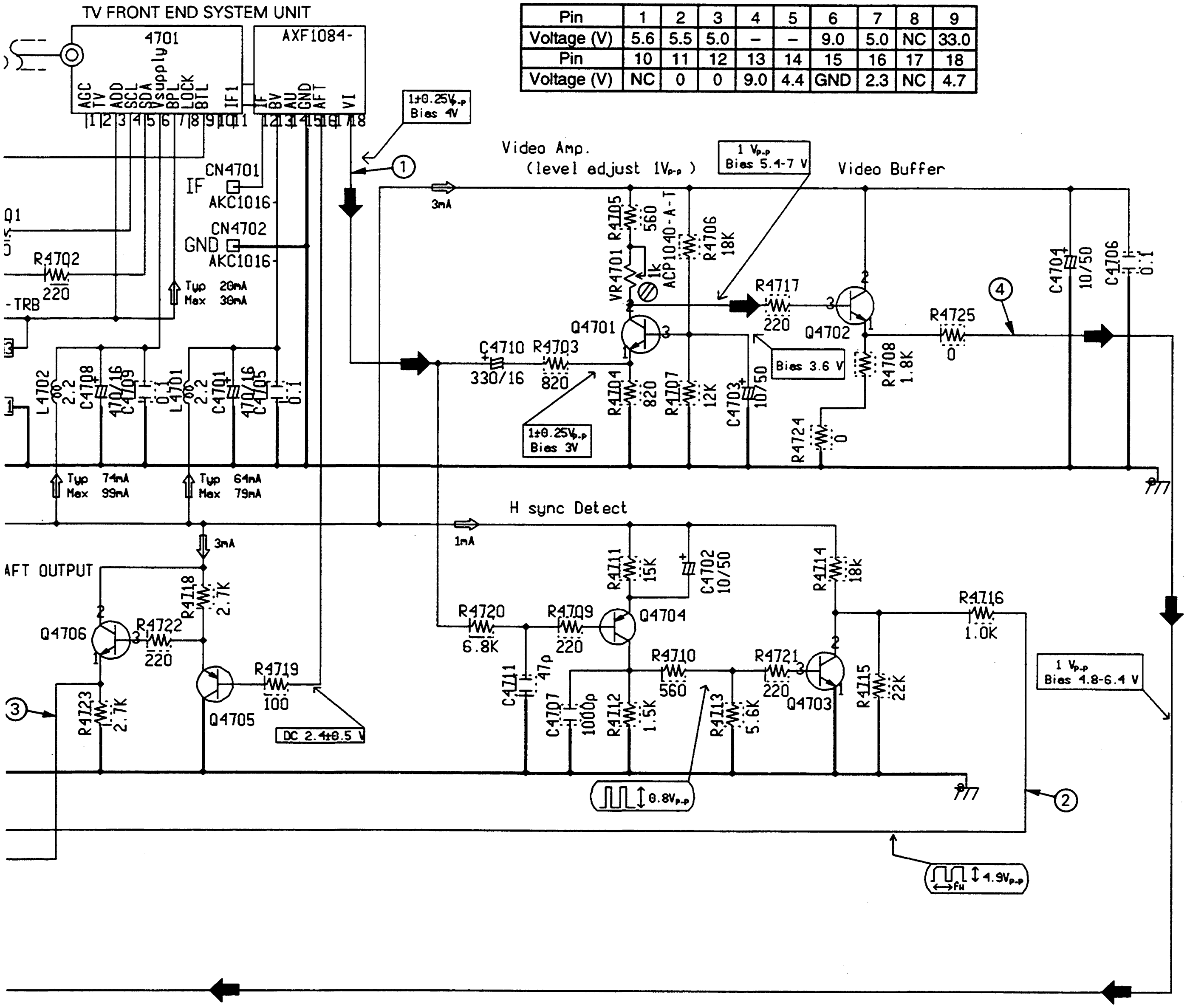
② Foot of R4716 (H SYNC 2)
V : 1V/div, H : 20µsec/div



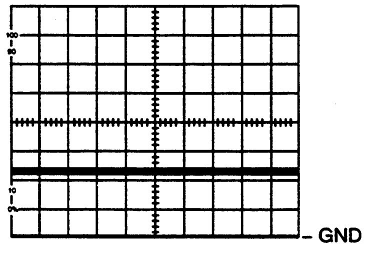
SIGNAL ROUTE :
➡ : Video Signal Route

Voltage of TV FRONT END (AXF1084)

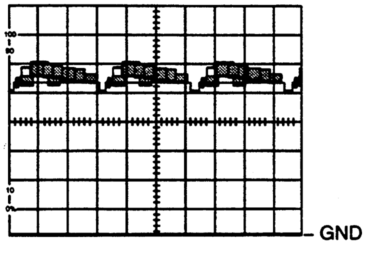
Pin	1	2	3	4	5	6	7	8	9
Voltage (V)	5.6	5.5	5.0	–	–	9.0	5.0	NC	33.0
Pin	10	11	12	13	14	15	16	17	18
Voltage (V)	NC	0	0	9.0	4.4	GND	2.3	NC	4.7


TV FRONT END SYSTEM UNIT
4701
AXF1084-
AGC TV ADD SCL SDA Vsupply BPL LOCK BTL IF1 IF BV AU GND AFT VI
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18
1±0.25Vp-p Bias 4V
①
CN4701 IF AKC1016-
CN4702 GND AKC1016-
Q1
R4702 220
-TRB
Typ 20mA Max 30mA
L4702 2.2
C4708 470/16
C4709 0.1
L4701 2.2
C4701 470/16
C4705 0.1
Typ 74mA Max 99mA
Typ 64mA Max 79mA
Video Amp. (level adjust 1Vp-p)
3mA
1 Vp-p Bias 5.4-7 V
Video Buffer
R4705 560
VR4701 1k
ACP1040-A-T
R4706 18K
R4717 220
Q4701
Q4702
C4710 330/16
R4703 820
1±0.25Vp-p Bias 3V
R4704 820
R4707 12K
C4703 10/50
Bias 3.6 V
R4708 1.8K
R4724 0
R4725 0
④
C4704 10/50
C4706 0.1
H sync Detect
1mA
3mA
AFT OUTPUT
Q4706
R4722 220
R4718 2.7K
R4723 2.7K
③
Q4705
R4719 100
DC 2.4±0.5 V
R4720 6.8K
R4709 220
Q4704
R4711 15K
C4702 10/50
R4714 18K
R4716 1.0K
C4711 47p
C4707 1000p
R4712 1.5K
R4710 560
R4713 5.6K
R4721 220
Q4703
R4715 22K
1 Vp-p Bias 4.8-6.4 V
0.8Vp-p
②
4.9Vp-p
fH

③ Q4706 Emitter (AFT 2)
V : 1V/div, H : 20μsec/div

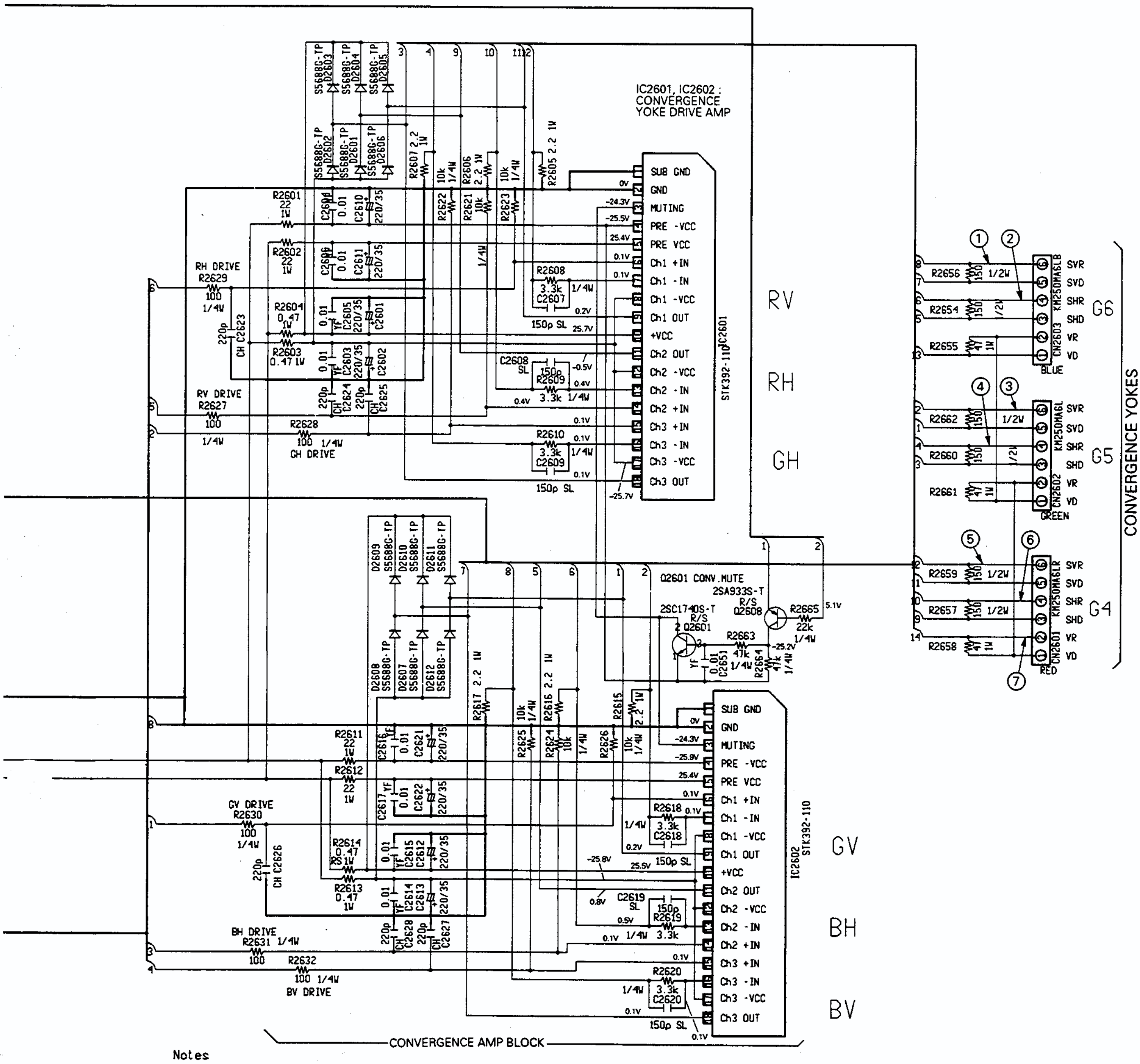


④ Foot of R4725 (TV 2 V)
V : 1V/div, H : 20μsec/div



C AMP ASSY (1/3) (AWZ6190)

• CONVER AMP AND V. DEFLECTION BLOCKS


IC2601, IC2602 :
CONVERGENCE
YOKE DRIVE AMP
S5688G-TP D2603
S5688G-TP D2604
S5688G-TP D2605
S5688G-TP D2602
S5688G-TP D2601
S5688G-TP D2606
R2601 22 1W
R2602 22 1W
R2604 0.47 1W
R2603 0.47 1W
RH DRIVE
R2629 100 1/4W
220p CH C2623
RV DRIVE
R2627 100 1/4W
R2628 100 1/4W
CH DRIVE
R2608 3.3k 1/4W
C2607 150p SL
C2608 SL 150p
R2609 3.3k 1/4W
R2610 3.3k 1/4W
C2609 150p SL
SUB GND
GND
MUTING
PRE -VCC
PRE VCC
Ch1 +IN
Ch1 -IN
Ch1 -VCC
Ch1 OUT
+VCC
Ch2 OUT
Ch2 -VCC
Ch2 -IN
Ch2 +IN
Ch3 +IN
Ch3 -IN
Ch3 -VCC
Ch3 OUT
STK392-110 IC2601
RV
RH
GH
Q2601 CONV.MUTE
2SA933S-T R/S Q2608
2SC1740S-T R/S Q2601
R2665 22k 1/4W
R2663 47k 1/4W
R2664 47k 1/4W
GV DRIVE
R2630 100 1/4W
220p CH C2626
BH DRIVE
R2631 1/4W 100
R2632 100 1/4W
BV DRIVE
R2611 22 1W
R2612 22 1W
R2614 0.47 RS 1W
R2613 0.47 1W
R2618 3.3k C2618
C2619 SL 150p
R2619 3.3k
R2620 3.3k C2620
150p SL
STK392-110 IC2602
GV
BH
BV
CONVERGENCE AMP BLOCK
R2656 150 1/2W
R2654 150 1/2W
R2655 47 1W
CN2603 KM250MA6LB
SVR
SVD
SHR
SHD
VR
VD
BLUE
G6
R2662 150 1/2W
R2660 150 1/2W
R2661 47 1W
CN2602 KM250MA6L
GREEN
G5
R2659 150 1/2W
R2657 150 1/2W
R2658 47 1W
CN2601 KM250MA6LR
RED
G4
CONVERGENCE YOKES
① ② ③ ④ ⑤ ⑥ ⑦

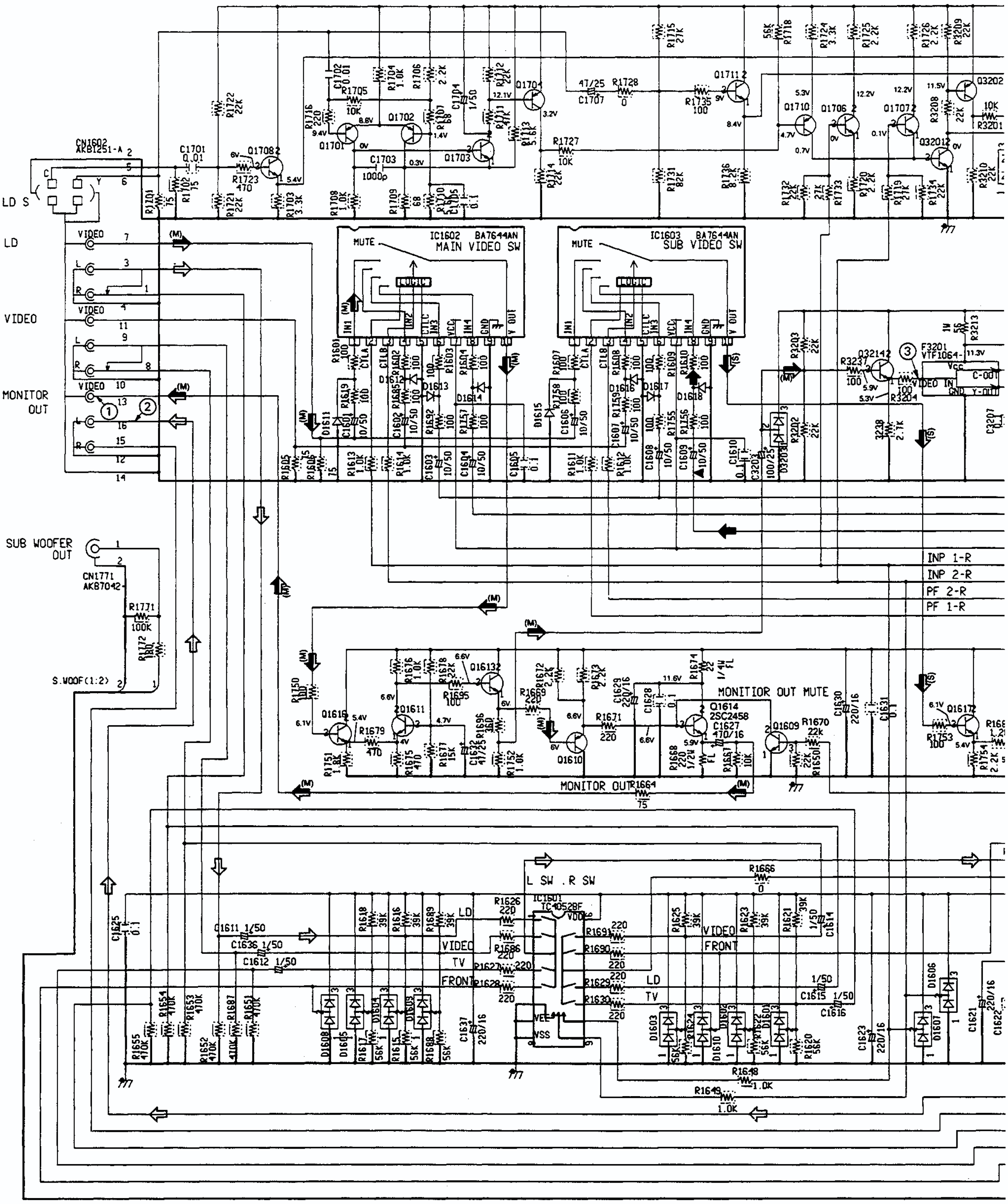
Notes
1. RESISTERS
(RS):METAL OXIDE FILM RESISTER
(RT):CEMENT RESISTER
(RN):METAL FILM RESISTER
(FL):NON FLAMMABLE RESISTER
THE OTHERS:CARBONFILM RESISTER (1/4 W)
Figures in pharentheses
show the rated wattage.
Those unspecified ones are of 1/4W.
K:KΩ ,M:MΩ ,Unspecified ones are of Ω

2. CAPACITORS
(HA):Aluninium electrolytic capasitors
p:pF,Unspecified ones are of uF
Capacity/Voltage
Unspecified ones are of 50V

3.6 AV I/O ASSY (2/3)

B AV I/O ASSY (2/3) (AWZ6197)

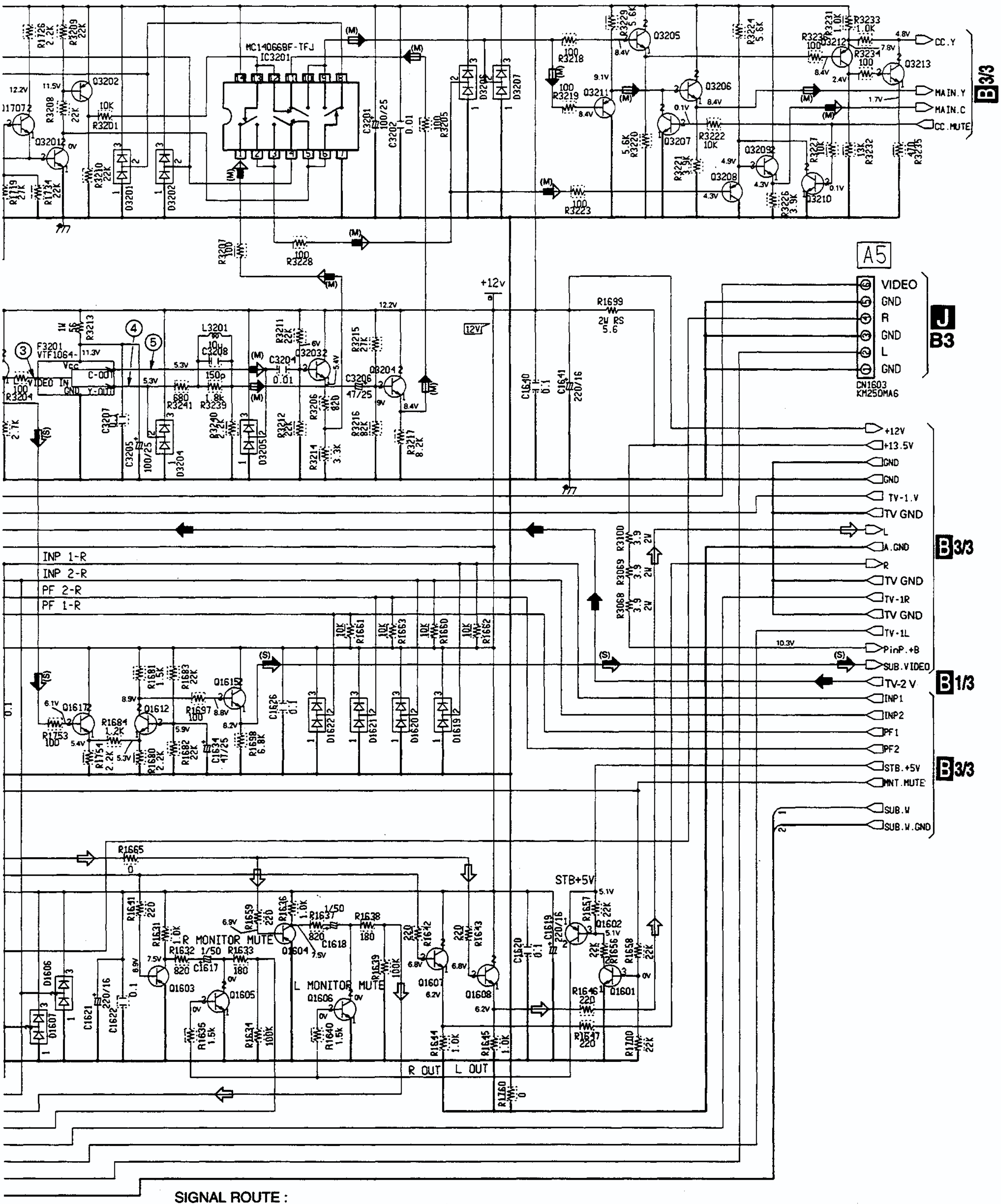
• AV I/O, Y/C SEP, S INPUT AND SUB WOOFER BLOCKS


CN1602
AKB1251-A
LD S
LD
VIDEO
MONITOR OUT
SUB WOOFER OUT
CN1771
AKB7042
S.WOOF(1:2)
IC1602 BA7644AN
MAIN VIDEO SW
IC1603 BA7644AN
SUB VIDEO SW
MUTE
LOGIC
IN1
CTLA
IN2
CTLC
IN3
VCC
IN4
GND
V OUT
Q1701
Q1702
Q1703
Q1704
Q1706
Q1707
Q1708
Q1710
Q1711
Q3201
Q3202
Q3214
F3201
VTF1064
VIDEO IN
C-OUT
Y-OUT
INP 1-R
INP 2-R
PF 2-R
PF 1-R
MONITIOR OUT MUTE
Q1614
2SC2458
Q1609
Q1610
Q1611
Q1613
Q1615
Q1617
MONITOR OUT
IC1601
TC4052BF
L SW .R SW
VDD
VEE
VSS
LD
VIDEO
TV
FRONT

NOTE

1.RESISTORS Indicated in 1/2W,1/4W,1/10W,1WFL,2Wfl +5% tolerance unless otherwise notted k:k ,M:M
2.CAPACITORS Indicated in capacity (F)/(V) unless otherwise noted pF.
Indicated without voltage is 50V except electrolytic capacitor.

2SC2712-TLB 2SA1162-TLB 1SS226-TRB 1SS352-TRB


MC14066BF-TFJ
IC3201
Q3202
Q3201
D3201
D3202
R3201
R3208
R3209
R3210
R1726
R1719
R1734
R3205
C3201
C3202
D3206
D3207
R3218
R3219
R3220
R3221
R3222
R3223
R3224
R3226
R3227
R3229
R3231
R3232
R3233
R3234
R3235
R3236
Q3205
Q3206
Q3207
Q3208
Q3209
Q3210
Q3211
Q3212
Q3213
CC.Y
MAIN.Y
MAIN.C
CC.MUTE
B3/3
R3207
R3228
+12V
A5
VIDEO
GND
R
GND
L
GND
CN1603
KM250MA6
J
B3
R1699
2W RS
5.6
F3201
VTF1064-
VIDEO IN
C-OUT
Y-OUT
GND
L3201
C3208
R3241
R3239
R3240
R3211
R3212
R3213
R3214
R3215
R3216
R3217
C3204
C3205
C3206
C3207
D3204
D3205
Q3203
Q3204
C1640
C1641
+12V
+13.5V
GND
GND
TV-1.V
TV GND
L
A.GND
R
TV GND
TV-1R
TV GND
TV-1L
PinP.+B
SUB.VIDEO
TV-2 V
B1/3
INP1
INP2
PF1
PF2
STB.+5V
MNT.MUTE
SUB.W
SUB.W.GND
B3/3
R3068
R3069
R3100
INP 1-R
INP 2-R
PF 2-R
PF 1-R
R1661
R1663
R1660
R1662
D1622
D1621
D1620
D1619
Q1617
Q1612
Q1615
R1753
R1684
R1681
R1683
R1697
R1680
R1682
R1751
R1698
C1634
C1626
R1665
STB+5V
R MONITOR MUTE
L MONITOR MUTE
R1641
R1631
R1632
R1633
R1635
R1634
R1659
R1636
R1637
R1638
R1639
R1640
R1642
R1643
R1644
R1645
R1646
R1647
R1656
R1657
R1658
R1700
R1760
C1617
C1618
C1619
C1620
C1621
C1622
Q1601
Q1602
Q1603
Q1604
Q1605
Q1606
Q1607
Q1608
D1606
D1607
R OUT
L OUT

SIGNAL ROUTE :

➡ : Video Signal Route

(M)➡ : Video Signal Route (Main picture)

(S)➡ : Video Signal Route (Sub picture)

(M)⇨ : Y Signal Route (Main picture)

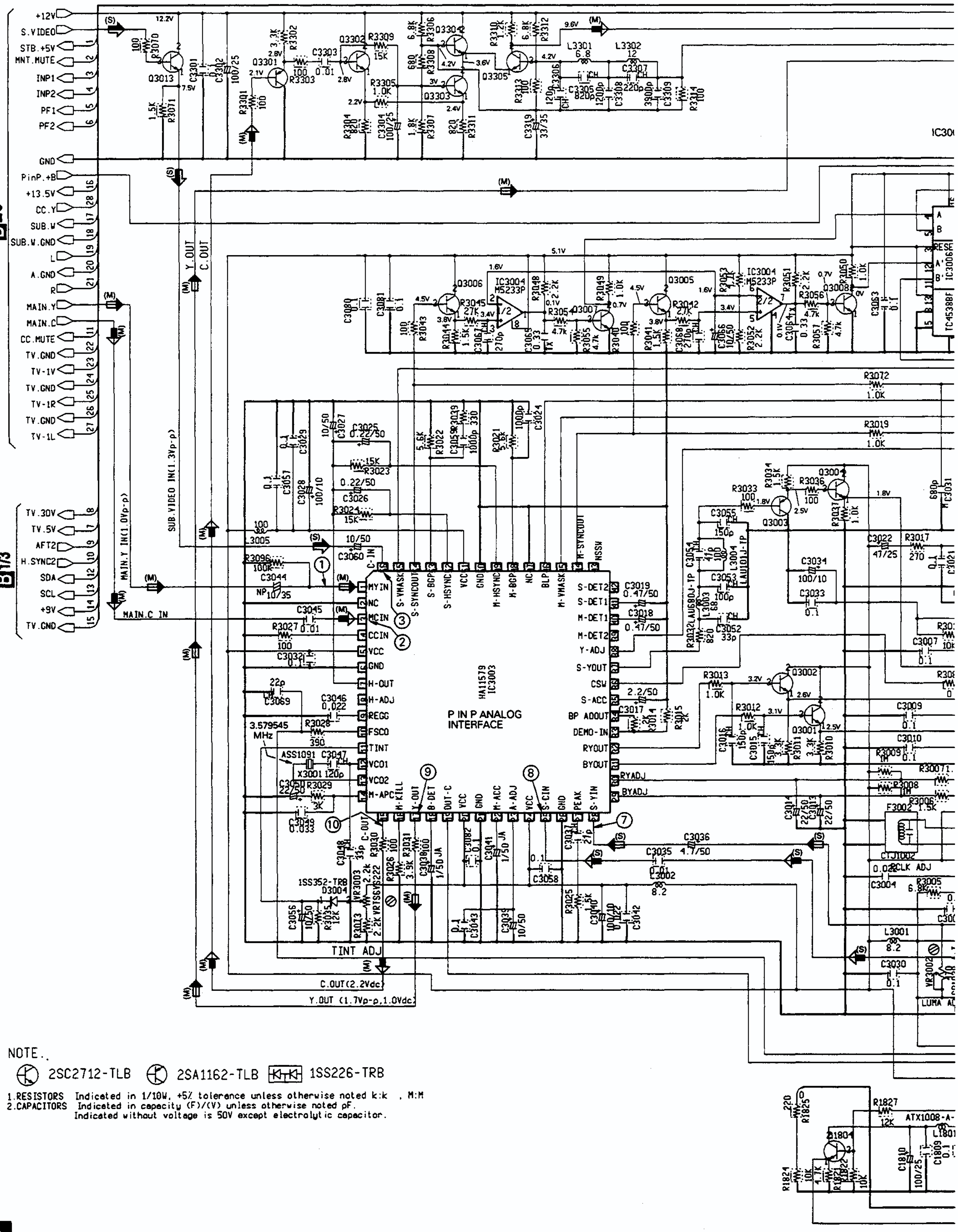
(M)➡ : C Signal Route (Main picture)

⇨ : Audio Signal Route (L ch)

3.7 AV I/O ASSY (3/3)

B AV I/O ASSY (3/3) (AWZ6197)

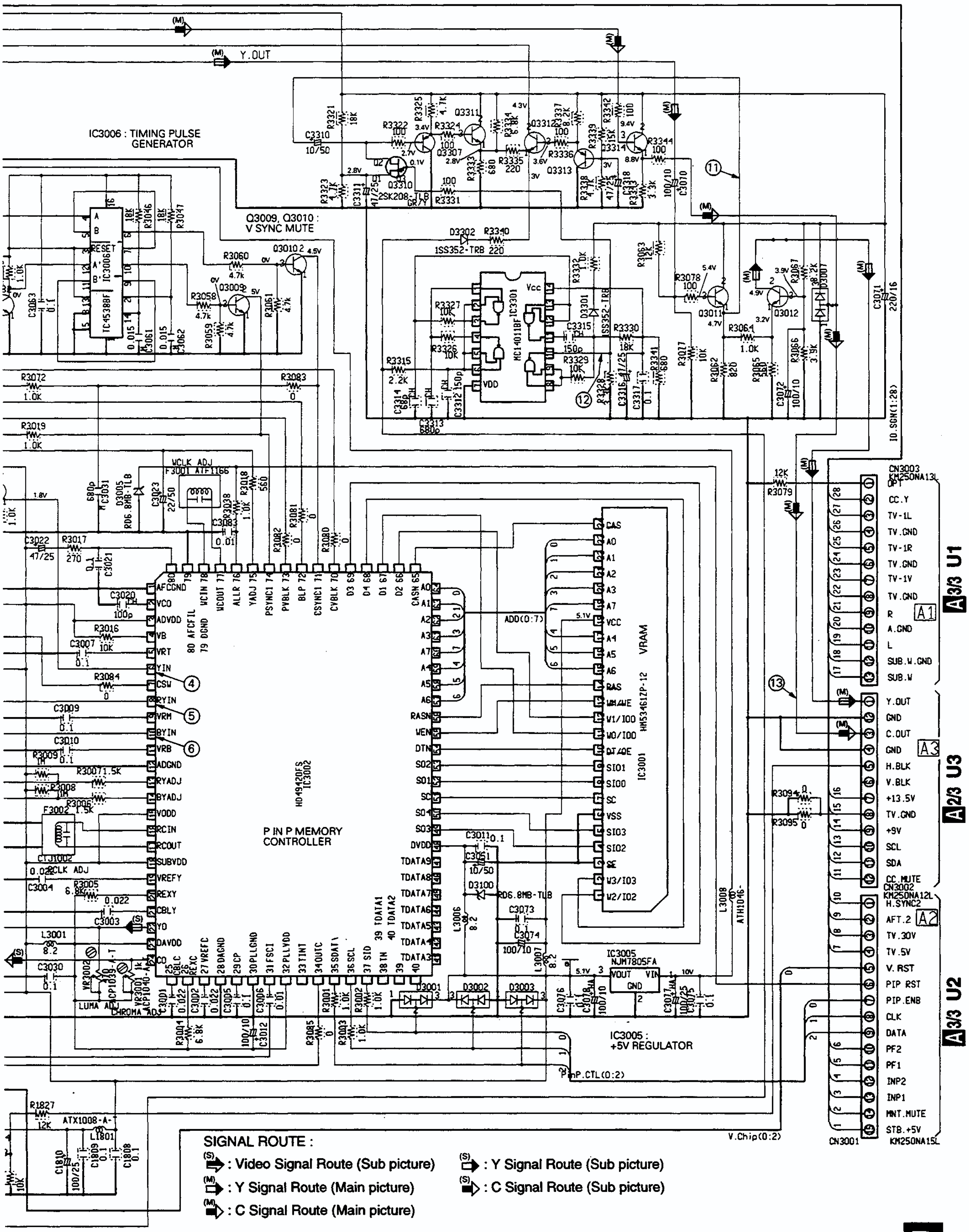
- P IN P AND CNR BLOCKS


+12V
S.VIDEO
STB.+5V
MNT.MUTE
INP1
INP2
PF1
PF2
GND
PinP.+B
+13.5V
CC.Y
SUB.V
SUB.V.GND
L
A.GND
R
MAIN.Y
MAIN.C
CC.MUTE
TV.GND
TV-1V
TV.GND
TV-1R
TV.GND
TV-1L
B2/3
TV.30V
TV.5V
AFT2
H.SYNC2
SDA
SCL
+9V
TV.GND
B1/3
MAIN.C IN
MAIN.Y IN(1.0Vp-p)
SUB.VIDEO IN(1.3Vp-p)
Y.OUT
C.OUT
Q3013
Q3301
Q3302
Q3303
Q3304
Q3305
Q3306
Q3007
Q3005
Q3008
Q3004
Q3003
Q3002
Q3001
IC3004 M5233P
IC3003
HA11579
P IN P ANALOG INTERFACE
IC3006 TC4538BP
3.579545 MHz
ASS1091 X3001
1SS352-TRB D3004
VR3003
VR3002
TINT ADJ
CLK ADJ
LUMA ADJ
L3301
L3302
L3004 LAU101J-TP
L3003 LAU680J-TP
L3001
F3002
CTJ1002
ATX1008-A
Q1804
L1801
C.OUT(2.2Vdc)
Y.OUT (1.7Vp-p,1.0Vdc)
MYIN
NC
MCIN
CCIN
VCC
GND
H-OUT
H-ADJ
REGG
FSCO
TINT
VCO1
VCO2
M-APC
S-VMASK
S-SYNCOUT
S-BGP
S-HSYNC
M-HSYNC
M-BGP
BLP
M-VMASK
M-SYNCOUT
NSSW
S-DET2
S-DET1
M-DET1
M-DET2
Y-ADJ
S-YOUT
CSW
S-ACC
BP ADOUT
DEMO-IN
RYOUT
BYOUT
RYADJ
BYADJ
M-KILL
Y-OUT
B-DET
OUT-C
M-ACC
A-ADJ
S-CIN
PEAK
S-YIN
C-IN
C-OUT
①
②
③
⑦
⑧
⑨
⑩

NOTE..

2SC2712-TLB 2SA1162-TLB 1SS226-TRB

1.RESISTORS Indicated in 1/10W, ±5% tolerance unless otherwise noted k:k , M:M
2.CAPACITORS Indicated in capacity (F)/(V) unless otherwise noted pF.
Indicated without voltage is 50V except electrolytic capacitor.


IC3006 : TIMING PULSE GENERATOR
Q3009, Q3010 : V SYNC MUTE
Y.OUT
IC3006 TC4538BF
IC3301 MC14011BF
IC3002 HD49420FS
P IN P MEMORY CONTROLLER
IC3001 HM53461ZP-12
VRAM
IC3005 NJM7805FA
IC3005 : +5V REGULATOR
VCLK ADJ
CLK ADJ
LUMA ADJ
CHROMA ADJ
ADD(0:7)
P.CTL(0:2)
V.Chip(0:2)
IO.SCN(1:28)
CN3003 KM250NA13L
CN3002 KM250NA12L
CN3001 KM250NA15L
OPT
CC.Y
TV-1L
TV.GND
TV-1R
TV.GND
TV-1V
TV.GND
R
A.GND
L
SUB.W.GND
SUB.W
Y.OUT
GND
C.OUT
GND
H.BLK
V.BLK
+13.5V
TV.GND
+9V
SCL
SDA
CC.MUTE
H.SYNC2
AFT.2
TV.30V
TV.5V
V.RST
PIP RST
PIP.ENB
CLK
DATA
PF2
PF1
INP2
INP1
MNT.MUTE
STB.+5V
A3/3 U1
A1
A3
A3/3 U3
A2/3 U3
A2
A3/3 U2
⑪
⑫
⑬
④
⑤
⑥

SIGNAL ROUTE :

(S) : Video Signal Route (Sub picture)

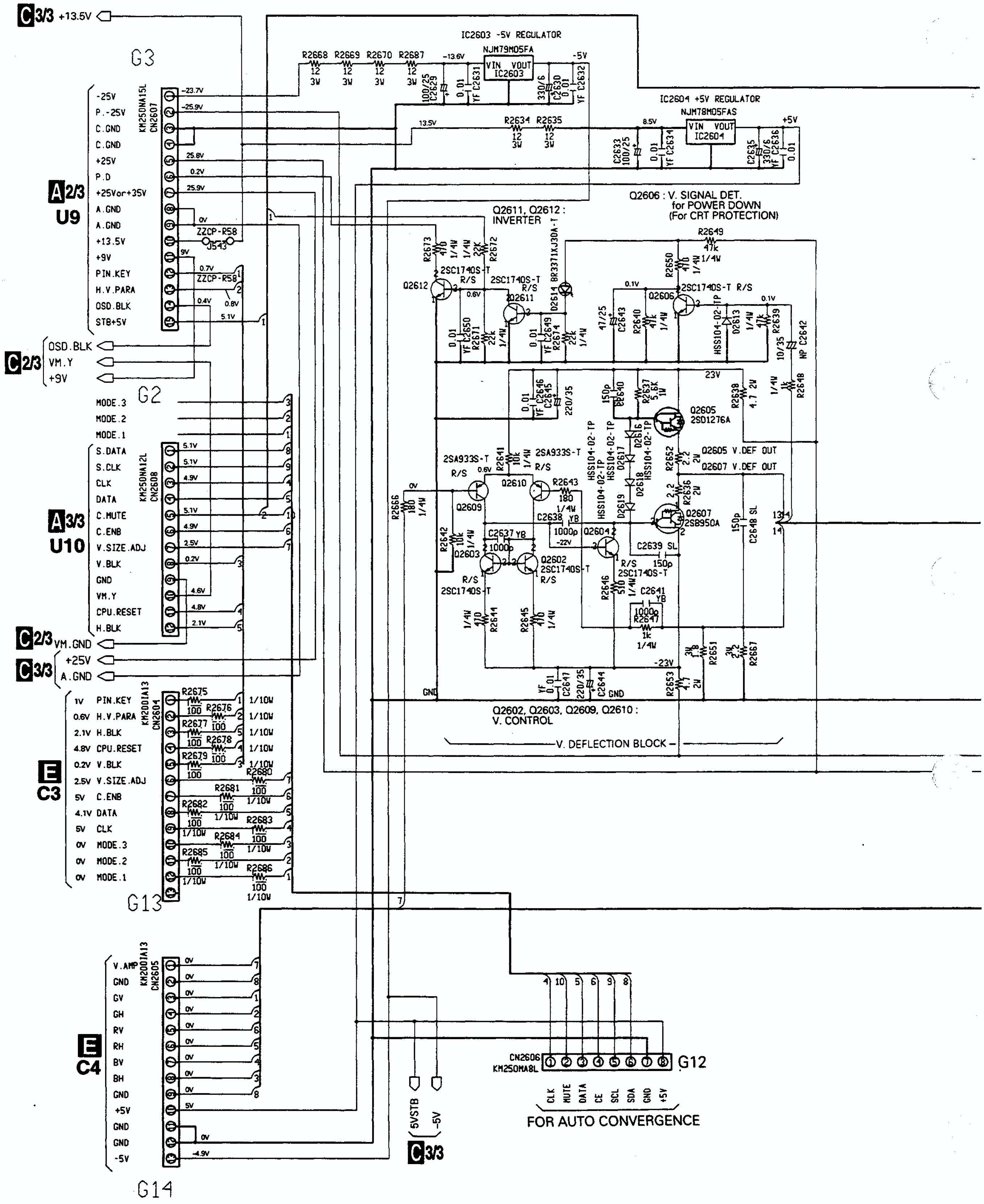
(S) : Y Signal Route (Sub picture)

(M) : Y Signal Route (Main picture)

(S) : C Signal Route (Sub picture)

(M) : C Signal Route (Main picture)

3.8 AMP ASSY (1/3)


C3/3 +13.5V
G3
IC2603 -5V REGULATOR
NJM79M05FA
IC2604 +5V REGULATOR
NJM78M05FAS
R2668 R2669 R2670 R2687
12 3W
R2634 R2635
KM250NA15L CN2607
-25V
P.-25V
C.GND
C.GND
+25V
P.D
+25Vor+35V
A.GND
A.GND
+13.5V
+9V
PIN.KEY
H.V.PARA
OSD.BLK
STB+5V
A2/3 U9
ZZCP-R58
J543
C2/3 OSD.BLK VM.Y +9V
Q2606 : V. SIGNAL DET. for POWER DOWN (For CRT PROTECTION)
Q2611, Q2612 : INVERTER
2SC1740S-T R/S
2SD1276A
2SB950A
2SA933S-T R/S
HSS104-02-TP
BR3371XJ30A-T
Q2605 V.DEF OUT
Q2607 V.DEF OUT
G2
MODE.3
MODE.2
MODE.1
KM250NA12L CN2608
S.DATA
S.CLK
CLK
DATA
C.MUTE
C.ENB
V.SIZE.ADJ
V.BLK
GND
VM.Y
CPU.RESET
H.BLK
A3/3 U10
C2/3 VM.GND
C3/3 +25V A.GND
Q2602, Q2603, Q2609, Q2610 : V. CONTROL
V. DEFLECTION BLOCK
KM200IA13 CN2604
1V PIN.KEY
0.6V H.V.PARA
2.1V H.BLK
4.8V CPU.RESET
0.2V V.BLK
2.5V V.SIZE.ADJ
5V C.ENB
4.1V DATA
5V CLK
0V MODE.3
0V MODE.2
0V MODE.1
E C3
G13
KM200IA13 CN2605
V.AMP
GND
GV
GH
RV
RH
BV
BH
GND
+5V
GND
GND
-5V
E C4
G14
5VSTB
-5V
C3/3
CN2606 KM250MA8L
G12
CLK
MUTE
DATA
CE
SCL
SDA
GND
+5V
FOR AUTO CONVERGENCE

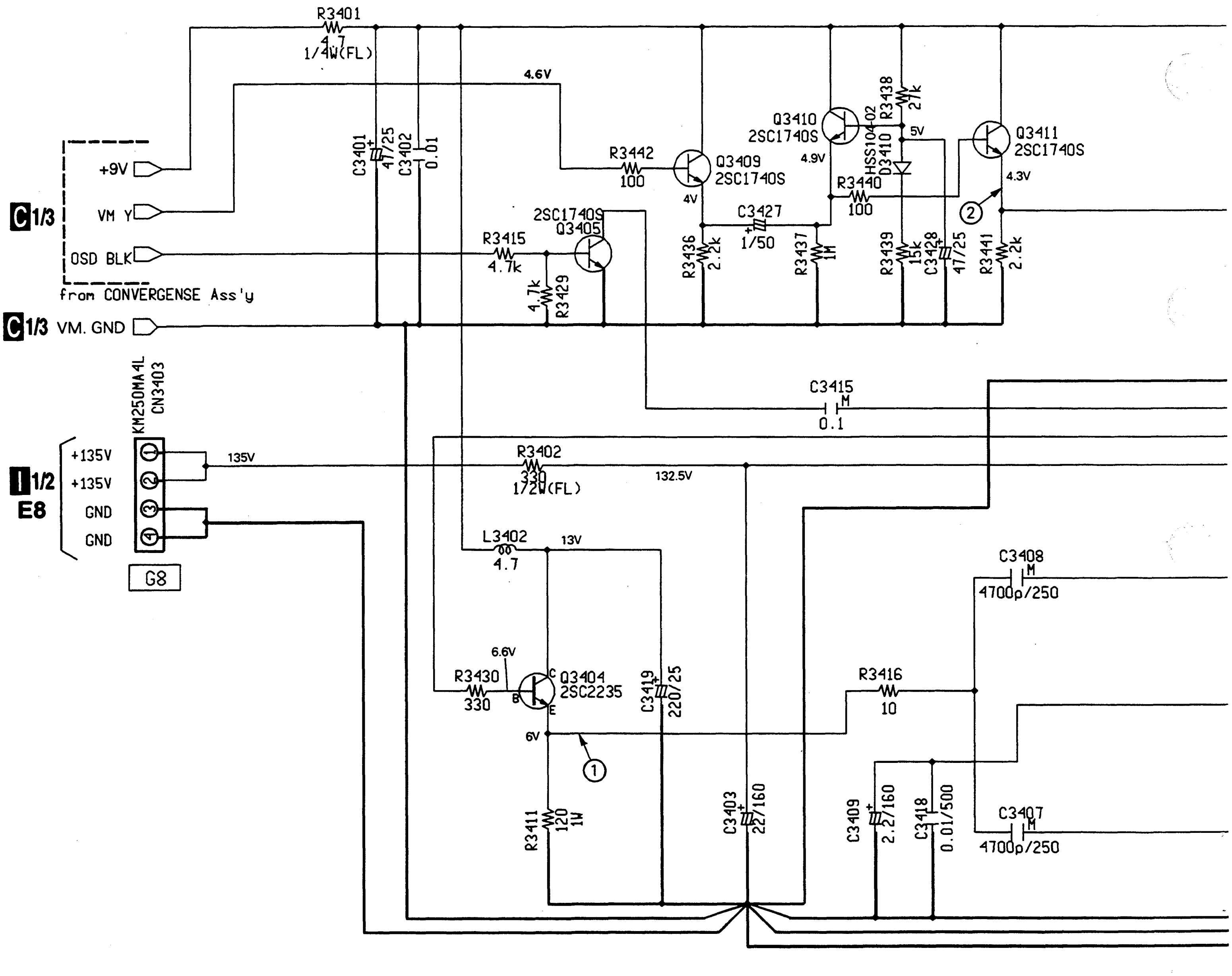
3.9 AMP ASSY (2/3)

Notes

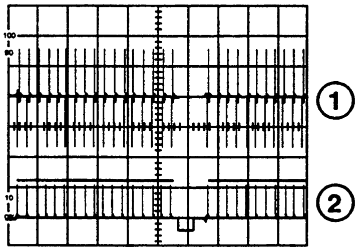
1. RESISTORS
   Indicated in ohm, 1/4W, ±5%
   tolerance unless otherwise noted k;k ohm, M;M ohm
2. CAPASITORS
   Indicated in capacity(uF)/Voltage unless
   otherwise noted, p;pF.
   Indication without voltage is 50V except electrolytic capacitor

C AMP ASSY (2/3) (AWZ6190)

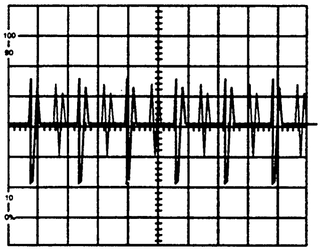
• VELOCITY MODULATION BLOCK


R3401
4.7
1/4W(FL)
4.6V
C3401
47/25
C3402
0.01
R3442
100
Q3409
2SC1740S
4V
Q3410
2SC1740S
4.9V
HSS104-02
D3410
R3438
27k
5V
Q3411
2SC1740S
4.3V
R3440
100
C3427
1/50
②
2SC1740S
Q3405
R3415
4.7k
R3429
4.7k
R3436
2.2k
R3437
1M
R3439
15k
C3428
47/25
R3441
2.2k
+9V
VM Y
OSD BLK
C1/3
from CONVERGENSE Ass'y
C1/3 VM. GND
KM250MA4L
CN3403
+135V
+135V
GND
GND
I1/2
E8
G8
135V
R3402
330
1/2W(FL)
132.5V
C3415
M
0.1
L3402
4.7
13V
C3408
M
4700p/250
6.6V
R3430
330
Q3404
2SC2235
B
C
E
C3419
220/25
R3416
10
6V
①
R3411
120
1W
C3403
22/160
C3409
2.2/160
C3418
0.01/500
C3407
M
4700p/250

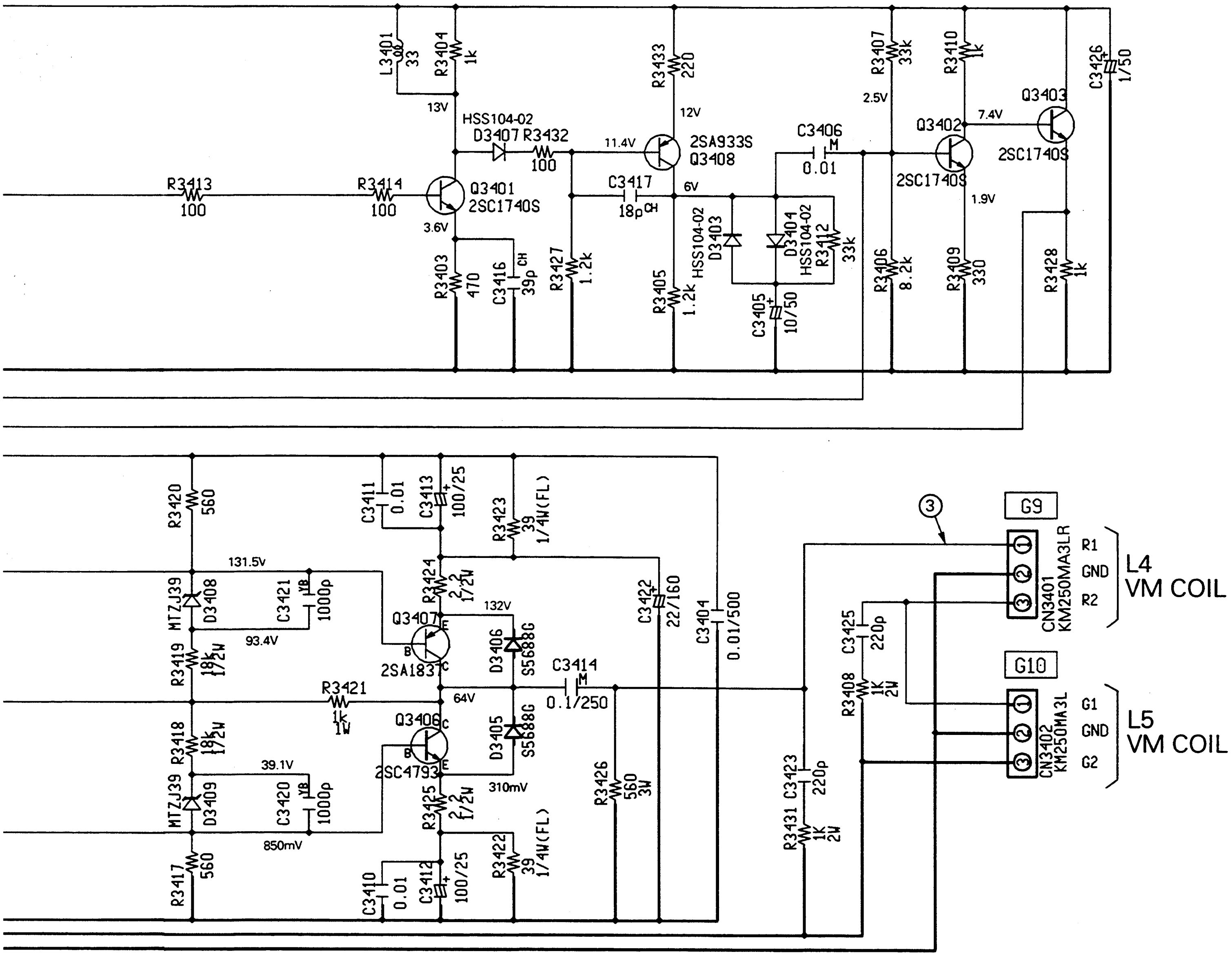
- Signal input : Cross-hatch



① **Upper: Q3404 Emitter**
V : 1V/div,   H : 10µsec/div
② **Lower: Q3411 Emitter**
V : 0.5V/div,   H : 10µsec/div
•AC range

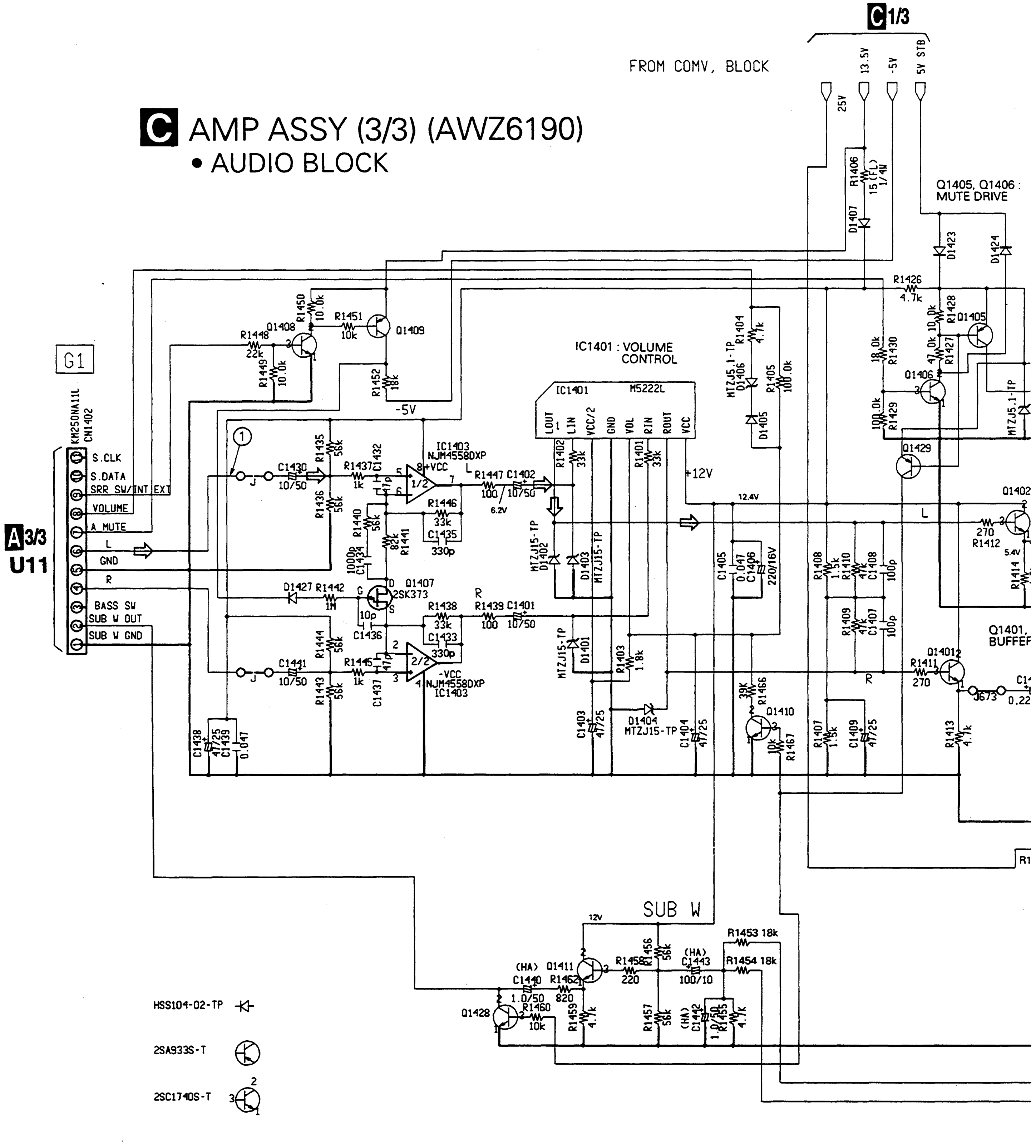


③ **G9- pin 3**
V : 20V/div,   H : 2µsec/div
•AC range



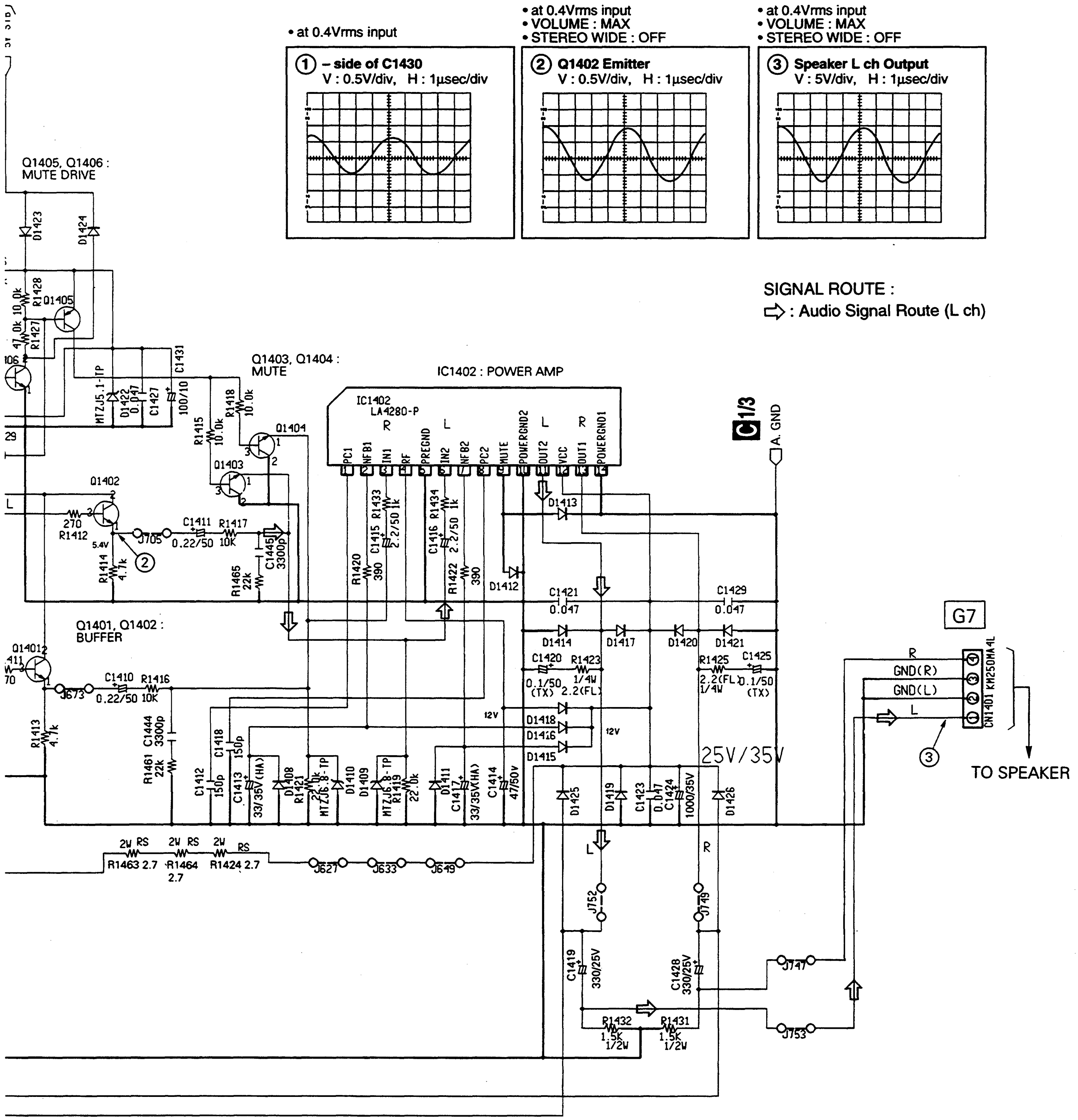
L3401 33
R3404 1k
13V
HSS104-02
D3407 R3432 100
R3433 220
12V
11.4V
2SA933S Q3408
C3406 M 0.01
R3407 33k
2.5V
R3410 1k
Q3402
7.4V
Q3403
2SC1740S
C3426 1/50
R3413 100
R3414 100
Q3401 2SC1740S
3.6V
C3417 18p CH
6V
2SC1740S
1.9V
R3403 470
C3416 39p CH
R3427 1.2k
R3405 1.2k
HSS104-02 D3403
D3404 HSS104-02
R3412 33k
C3405 10/50
R3406 8.2k
R3409 330
R3428 1k
R3420 560
C3411 0.01
C3413 100/25
R3423 39 1/4W(FL)
③
G9
131.5V
R3424 2.2 1/2W
132V
C3422 22/160
C3404 0.01/500
D3408 MTZJ39
C3421 YB 1000p
Q3407
E
B
C
2SA1837
D3406 S5688G
R1
GND
R2
CN3401 KM250MA3LR
L4 VM COIL
93.4V
R3419 18k 1/2W
C3414 M 0.1/250
C3425 220p
R3408 1K 2W
G10
R3421 1k 1W
64V
Q3406
2SC4793
D3405 S5688G
G1
GND
G2
CN3402 KM250MA3L
L5 VM COIL
R3418 18k 1/2W
39.1V
D3409 MTZJ39
C3420 YB 1000p
R3425 2.2 1/2W
310mV
R3426 560 3W
C3423 220p
R3431 1K 2W
850mV
R3417 560
C3410 0.01
C3412 100/25
R3422 39 1/4W(FL)

3.10 AMP ASSY (3/3)


C AMP ASSY (3/3) (AWZ6190)
• AUDIO BLOCK
C 1/3
FROM COMV, BLOCK
25V
13.5V
-5V
5V STB
R1406 15 (FL) 1/4W
D1407
Q1405, Q1406 : MUTE DRIVE
D1423
D1424
R1426 4.7k
R1428 10.0k
Q1405
R1427 47.0k
R1430 18.0k
Q1406
R1429 100.0k
MTZJ5.1-TP
Q1429
R1404 4.7k
MTZJ5.1-TP D1406
R1405 100.0k
D1405
IC1401 : VOLUME CONTROL
IC1401 M5222L
LOUT LIN VCC/2 GND VOL RIN ROUT VCC
R1402 33k
R1401 33k
+12V
12.4V
Q1402
L
R1412 270
5.4V
R1414
G1
KM250NA11L CN1402
S.CLK
S.DATA
SRR SW/INT EXT
VOLUME
A MUTE
L
GND
R
BASS SW
SUB W OUT
SUB W GND
A 3/3 U11
R1450 10.0k
Q1408
R1451 10k
Q1409
R1448 22k
R1449 10.0k
R1452 18k
-5V
①
C1430 10/50
R1435 56k
R1436 56k
R1437 1k
C1432 47p
IC1403 NJM4558DXP
+VCC
1/2
R1446 33k
C1435 330p
R1440 56k
R1441 82k
C1434 1000p
R1447 100
C1402 10/50
6.2V
MTZJ15-TP D1402
D1403 MTZJ15-TP
C1405 0.047
C1406 220/16V
R1408 1.5k
R1410 47k
C1408 100p
R1409 47k
C1407 100p
Q1401, BUFFER
D1427
R1442 1M
Q1407 2SK373
G D S
10p C1436
R1438 33k
C1433 330p
R1439 100
C1401 10/50
MTZJ15-TP D1401
R1403 1.8k
D1404 MTZJ15-TP
R1466 39K
Q1410
R1467 10K
R1444 56k
R1443 56k
C1441 10/50
R1445 1k
C1437 47p
2/2
-VCC
NJM4558DXP IC1403
C1438 47/25
C1439 0.047
C1403 47/25
C1404 47/25
R1407 1.5k
C1409 47/25
Q1401
R1411 270
J673
0.22
R1413 4.7k
R1
SUB W
12V
Q1411
(HA) C1440 1.0/50
R1462 820
R1458 220
R1456 56k
(HA) C1443 100/10
R1453 18k
R1454 18k
Q1428
R1460 10k
R1459 4.7k
R1457 56k
(HA) C1442 1.0/50
R1455 4.7k
HSS104-02-TP
2SA933S-T
2SC1740S-T

1. RESISTERS indicated in ,1/2W,1/4W,1/8W,1WFL,2WFL 5%.
tolerance unless otherwise noted K;K Ω,M;M Ω.
(F)+1%,(G)+2%,(K)+10%,(M)+20% tolerance.

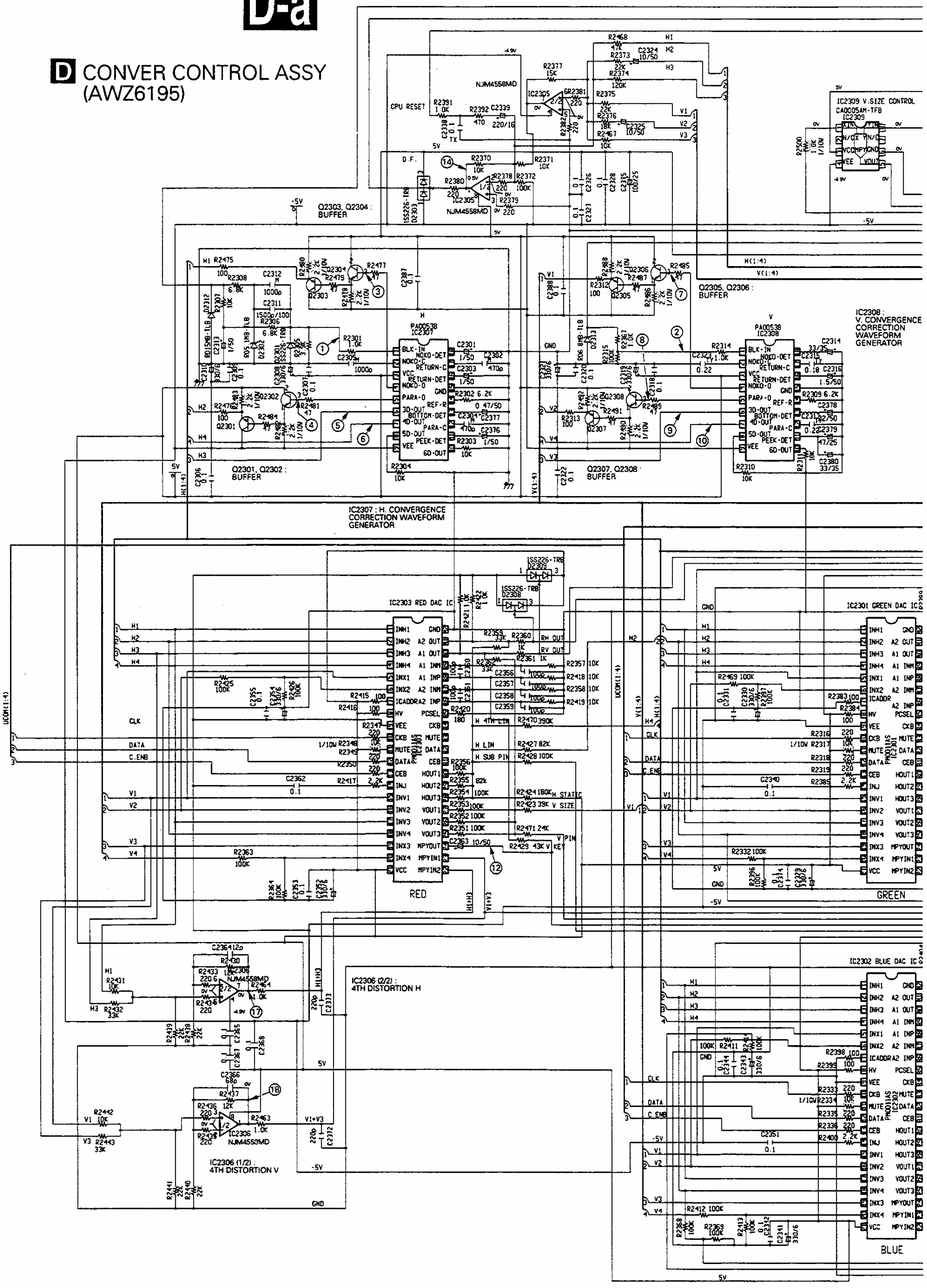
2 CAPACITORS indicated in capasity (F)/(V) unless otherwise noted pF.
indicated without voltage is 50V except electrolytic capacitor


• at 0.4Vrms input
① – side of C1430
V : 0.5V/div, H : 1μsec/div
• at 0.4Vrms input
• VOLUME : MAX
• STEREO WIDE : OFF
② Q1402 Emitter
V : 0.5V/div, H : 1μsec/div
• at 0.4Vrms input
• VOLUME : MAX
• STEREO WIDE : OFF
③ Speaker L ch Output
V : 5V/div, H : 1μsec/div
SIGNAL ROUTE :
⇨ : Audio Signal Route (L ch)
Q1405, Q1406 :
MUTE DRIVE
Q1403, Q1404 :
MUTE
IC1402 : POWER AMP
IC1402
LA4280-P
PC1
NFB1
IN1
RF
PREGND
IN2
NFB2
PC2
MUTE
POWERGND2
OUT2
VCC
OUT1
POWERGND1
Q1401, Q1402 :
BUFFER
C1/3
A. GND
G7
R
GND(R)
GND(L)
L
CN1401 KM250MA4L
TO SPEAKER
25V/35V
D1423
D1424
R1428 10.0k
R1427 47.0k
Q1405
MTZJ5.1-TP
D1422
C1427 0.047
C1431 100/10
R1415 10.0k
R1418 10.0k
Q1404
Q1403
Q1402
R1412 270
5.4V
R1414 4.7k
J705
C1411 0.22/50
R1417 10K
C1445 3300p
R1465 22k
R1433 1k
C1415 2.2/50
R1420 390
R1434 1k
C1416 2.2/50
R1422 390
D1412
D1413
C1421 0.047
C1429 0.047
D1414
D1417
D1420
D1421
C1420 0.1/50 (TX)
R1423 1/4W 2.2(FL)
R1425 2.2(FL) 1/4W
C1425 0.1/50 (TX)
12V
D1418
D1416
D1415
Q1401
J673
C1410 0.22/50
R1416 10K
R1413 4.7k
C1444 3300p
R1461 22k
C1412 150p
C1418 150p
C1413 33/35V(HA)
D1408
R1421 22.0k
MTZJ6.8-TP
D1410
D1409
MTZJ6.8-TP
R1419 22.0k
D1411
C1417 33/35V(HA)
C1414 47/50V
D1425
D1419
C1423 0.047
C1424 1000/35V
D1426
2W RS
R1463 2.7
R1464 2.7
R1424 2.7
J627
J633
J649
J752
J749
C1419 330/25V
C1428 330/25V
R1432 1.5K 1/2W
R1431 1.5K 1/2W
J747
J753

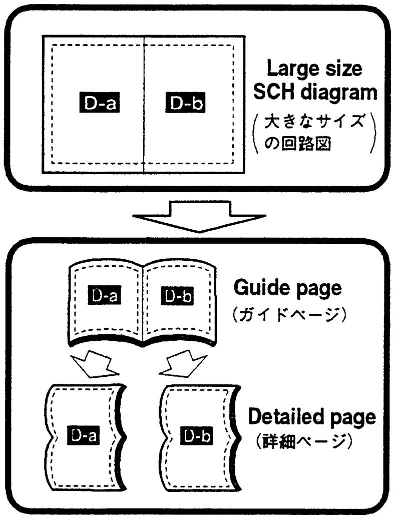
3.11 CONVER CONTROL AND CONNECTOR B ASSEMBLIES

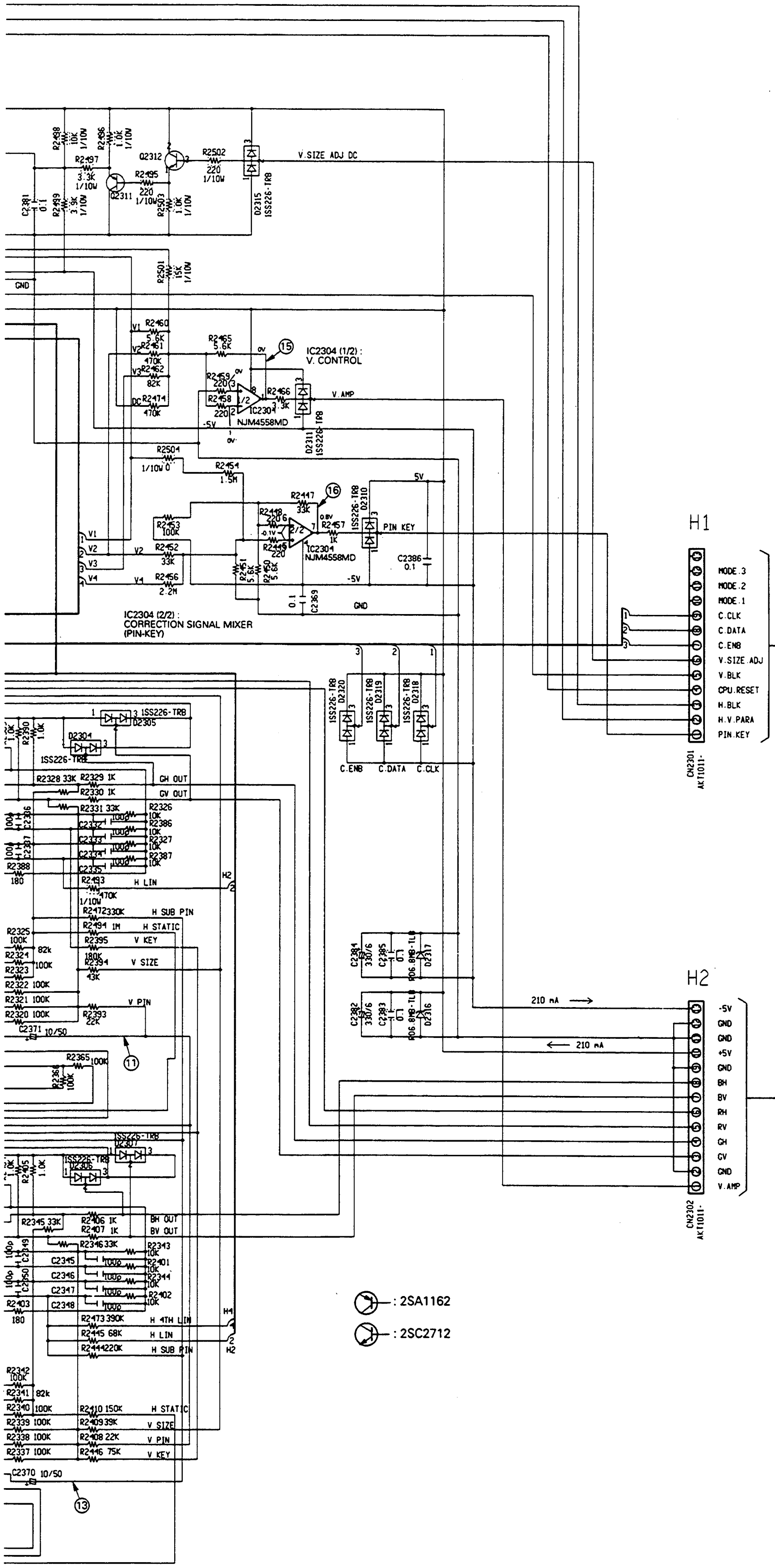
D-a

D CONVER CONTROL ASSY
(AWZ6195)

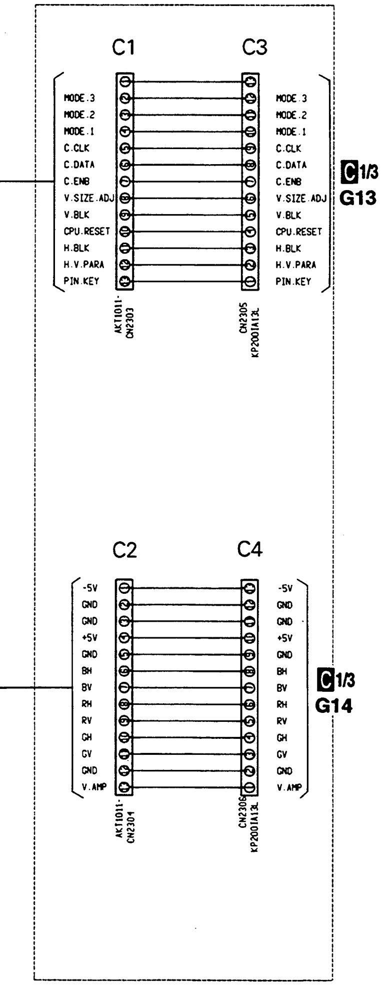

CPU RESET
NJM4558MD
IC2305
IC2309 V.SIZE CONTROL
CA0005AM-TFB
Q2303, Q2304 : BUFFER
Q2305, Q2306 : BUFFER
Q2301, Q2302 : BUFFER
Q2307, Q2308 : BUFFER
PA0053B
IC2307
IC2308
IC2308 : V. CONVERGENCE CORRECTION WAVEFORM GENERATOR
IC2307 : H. CONVERGENCE CORRECTION WAVEFORM GENERATOR
IC2303 RED DAC IC
IC2301 GREEN DAC IC
IC2302 BLUE DAC IC
PM0011AS
RED
GREEN
BLUE
1SS226-TRB
D2309
D2308
UCOM(1:4)
CLK
DATA
C.ENB
H1
H2
H3
H4
V1
V2
V3
V4
IC2306 (2/2) : 4TH DISTORTION H
IC2306 (1/2) : 4TH DISTORTION V
NJM4558MD
5V
-5V
-4.9V
GND
H(1:4)
V(1:4)

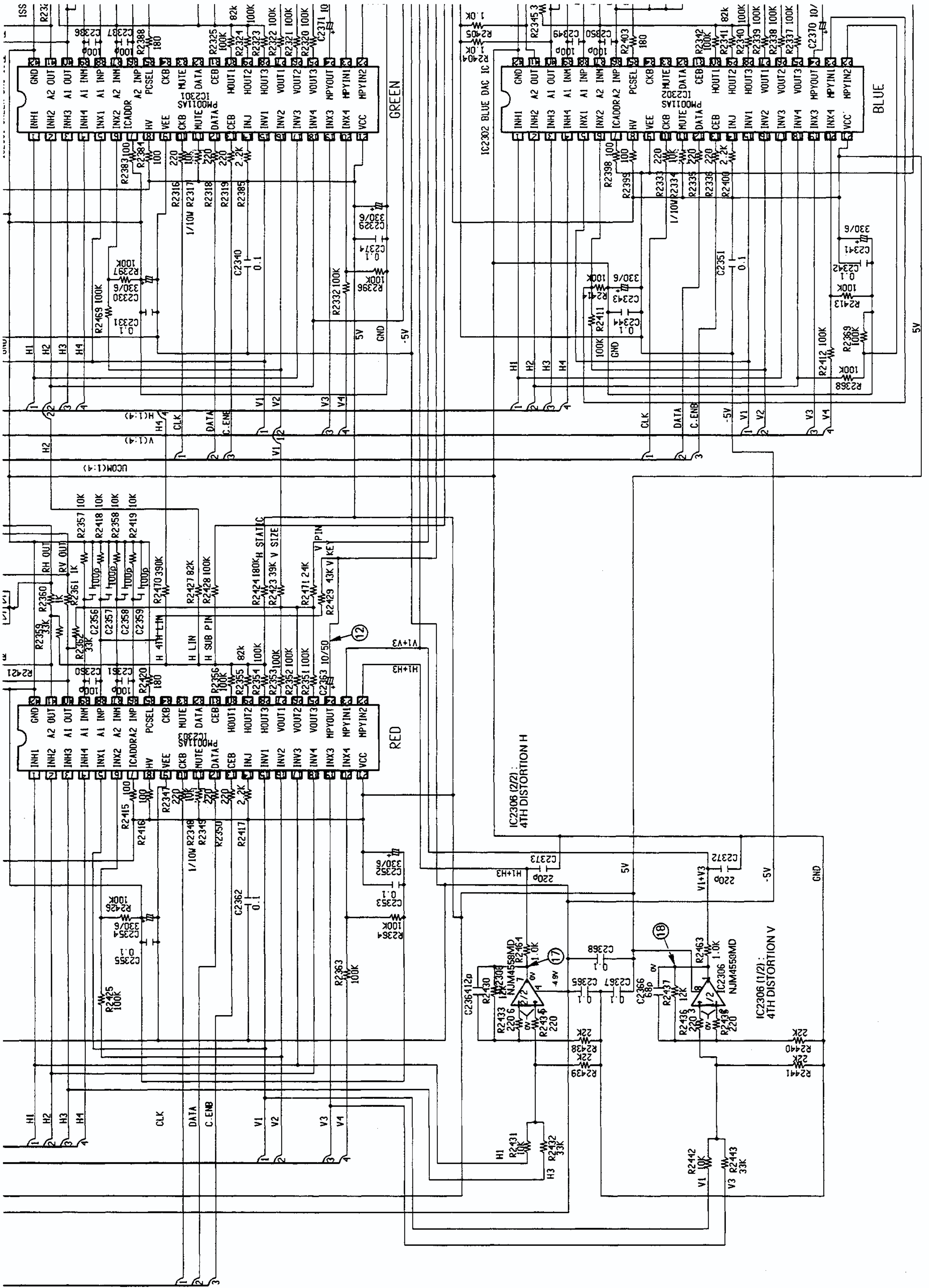
D-b


D-a
D-b
Large size SCH diagram
（大きなサイズの回路図）
Guide page
（ガイドページ）
Detailed page
（詳細ページ）


V.SIZE ADJ DC
R2498 10K 1/10W
R2496 1.0K 1/10W
R2497 3.3K 1/10W
Q2312
Q2311
R2502 220 1/10W
R2495 220 1/10W
R2499 3.9K 1/10W
R2503 10K 1/10W
C2381 0.1
D2315 1SS226-TRB
R2501 15K 1/10W
GND
R2460 5.6K
R2461 470K
R2462 82K
R2474 470K
R2465 5.6K
⑮
IC2304 (1/2) : V. CONTROL
R2459 220
R2458 220
R2466 3K
IC2304 NJM4558MD
D2311 1SS226-TRB
V.AMP
-5V
R2504 1/10W 0
R2454 1.5M
R2447 33K
⑯
D2310 1SS226-TRB
5V
R2448 220
R2449 220
R2457 1K
IC2304 NJM4558MD
PIN KEY
C2386 0.1
R2453 100K
R2452 33K
R2456 2.2M
R2451 5.6K
R2450 5.6K
C2369 0.1
-5V
GND
V1
V2
V3
V4
IC2304 (2/2) : CORRECTION SIGNAL MIXER (PIN-KEY)
D2320 1SS226-TRB
D2319 1SS226-TRB
D2318 1SS226-TRB
C.ENB
C.DATA
C.CLK
D2305 1SS226-TRB
D2304 1SS226-TRB
R2328 33K
R2329 1K
GH OUT
R2330 1K
GV OUT
R2331 33K
R2326 10K
R2386 10K
R2327 10K
R2387 10K
C2332 100p
C2333 100p
C2334 100p
C2335 100p
C2306
C2307
R2388 180
R2390 1.0K
R2493 470K 1/10W
H LIN
H2
R2472 330K
H SUB PIN
R2494 1M
H STATIC
R2395
V KEY
R2325 100K
R2324 82k
R2323 100K
R2394 43K
V SIZE
R2322 100K
R2321 100K
R2320 100K
V.PIN
R2393 22K
C2371 10/50
⑪
R2365 100K
R2366 100K
C2384 330/6
C2385 0.1
D2317 1SS226-TRB
C2382 330/6
C2383 0.1
D2316 1SS226-TRB
210 mA
210 mA
D2307 1SS226-TRB
D2306 1SS226-TRB
R2405 1.0K
R2345 33K
R2406 1K
BH OUT
R2407 1K
BV OUT
R2346 33K
R2343 10K
R2401 10K
R2344 10K
R2402 10K
C2345
C2346
C2347
C2348
C2349
C2350
R2403 180
R2473 390K
H 4TH LIN
H4
R2445 68K
H LIN
R2444 220K
H SUB PIN
H2
R2342 100K
R2341 82k
R2340 100K
R2410 150K
H STATIC
R2339 100K
R2409 39K
V SIZE
R2338 100K
R2408 22K
V PIN
R2337 100K
R2446 75K
V KEY
C2370 10/50
⑬
H1
MODE.3
MODE.2
MODE.1
C.CLK
C.DATA
C.ENB
V.SIZE ADJ
V.BLK
CPU.RESET
H.BLK
H.V.PARA
PIN.KEY
CN2301 AKT1011-
H2
-5V
GND
GND
+5V
GND
BH
BV
RH
RV
GH
GV
GND
V.AMP
CN2302 AKT1011-
: 2SA1162
: 2SC2712

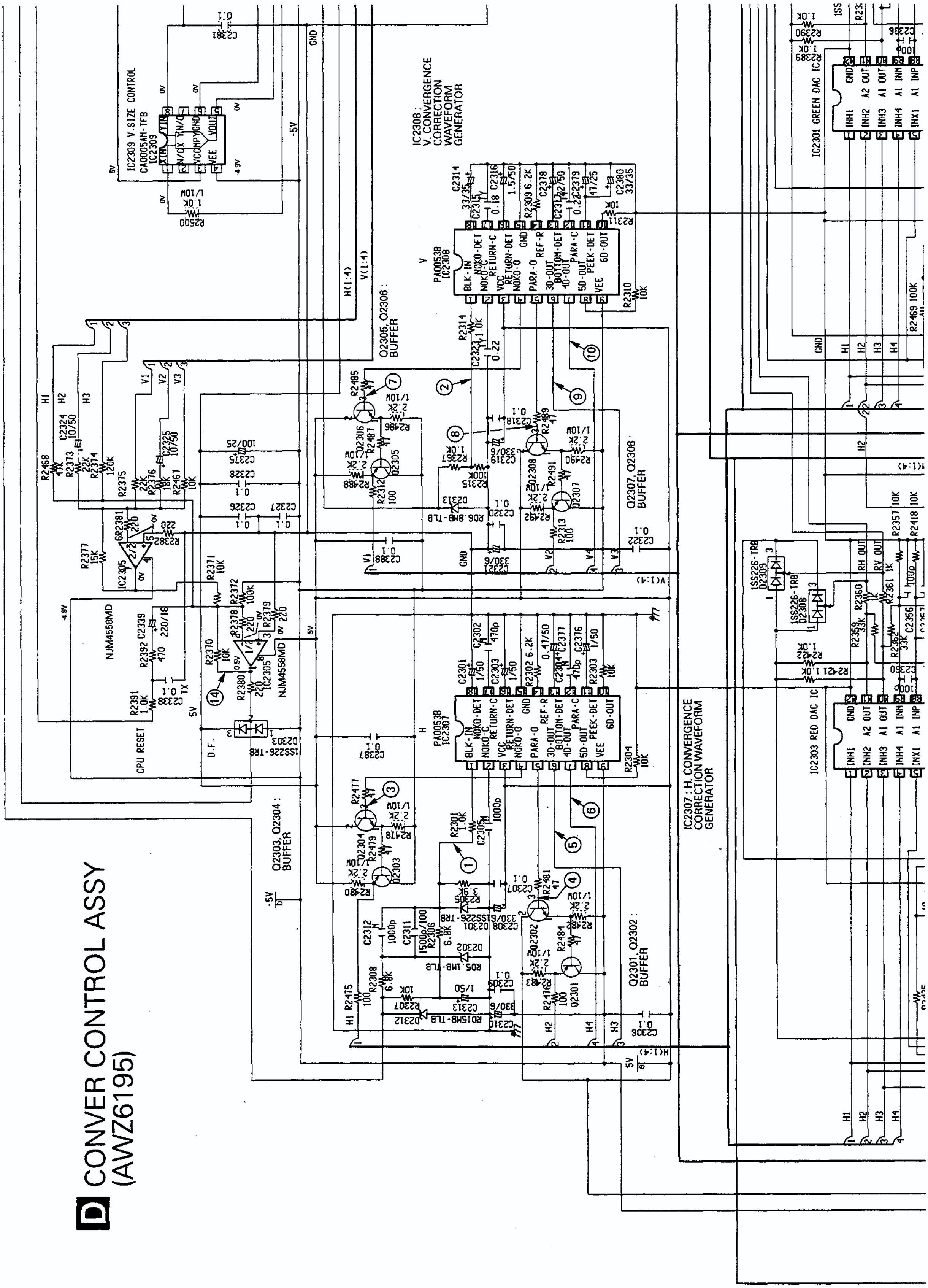
E CONNECTOR B ASSY (AWZ6196)


C1
C3
MODE.3
MODE.2
MODE.1
C.CLK
C.DATA
C.ENB
V.SIZE ADJ
V.BLK
CPU.RESET
H.BLK
H.V.PARA
PIN.KEY
AKT1011- CN2303
CN2305 KP200IA12L
C 1/3 G13
C2
C4
-5V
GND
GND
+5V
GND
BH
BV
RH
RV
GH
GV
GND
V.AMP
AKT1011- CN2304
CN2306 KP200IA13L
C 1/3 G14


GREEN
IC2301 PM0011AS
BLUE
IC2302 PM0011AS
IC2302 BLUE DAC IC
RED
IC2303 PM0011AS
IC2306 (2/2): 4TH DISTORTION H
IC2306 (1/2): 4TH DISTORTION V
IC2306 NJM4558MD
IC2306 NJM4550MD
UCOM(1:4)
H(1:4)
V(1:4)
H1
H2
H3
H4
V1
V2
V3
V4
CLK
DATA
C.ENB
5V
-5V
GND
H1+H3
V1+V3
H STATIC
V SIZE
V PIN
H LIN
H SUB PIN
H 4TH LIN
RH OUT
RV OUT

D-a D-b

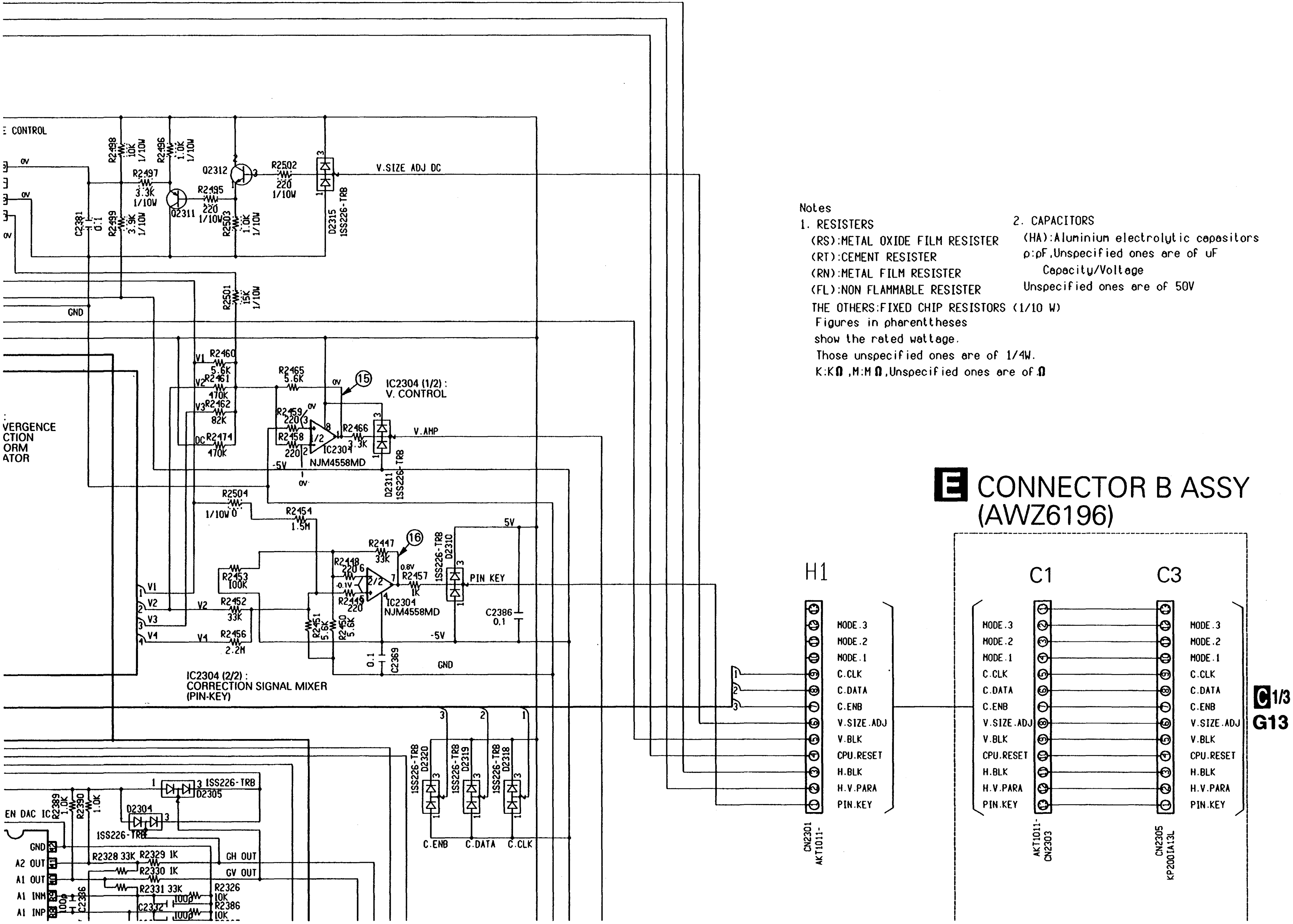
D CONVER CONTROL ASSY
(AWZ6195)


IC2309 V.SIZE CONTROL
CA0005AM-TFB
IC2308 : V.CONVERGENCE CORRECTION WAVEFORM GENERATOR
PA0053B IC2308
IC2307 : H.CONVERGENCE CORRECTION WAVEFORM GENERATOR
PA0053B IC2307
BLK-IN
NOKO-DET
NOKO-C
RETURN-C
VCC
RETURN-DET
NOKO-O
GND
PARA-O
REF-R
3D-OUT
BOTTOM-DET
4D-OUT
PARA-C
5D-OUT
PEEK-DET
VEE
6D-OUT
Q2305, Q2306 : BUFFER
Q2307, Q2308 : BUFFER
Q2303, Q2304 : BUFFER
Q2301, Q2302 : BUFFER
NJM4558MD
IC2305
CPU RESET
D.F.
1SS226-TRB
IC2301 GREEN DAC IC
IC2303 RED DAC IC
INH1
INH2
INH3
INH4
INX1
A1 INP
A1 OUT
A2 OUT
GND
RH OUT
RV OUT
H1
H2
H3
H4
V1
V2
V3
V4
H(1:4)
V(1:4)
5V
-5V
GND
RD5.1MB-TLB
RD15MB-TLB
RD6.8MB-TLB

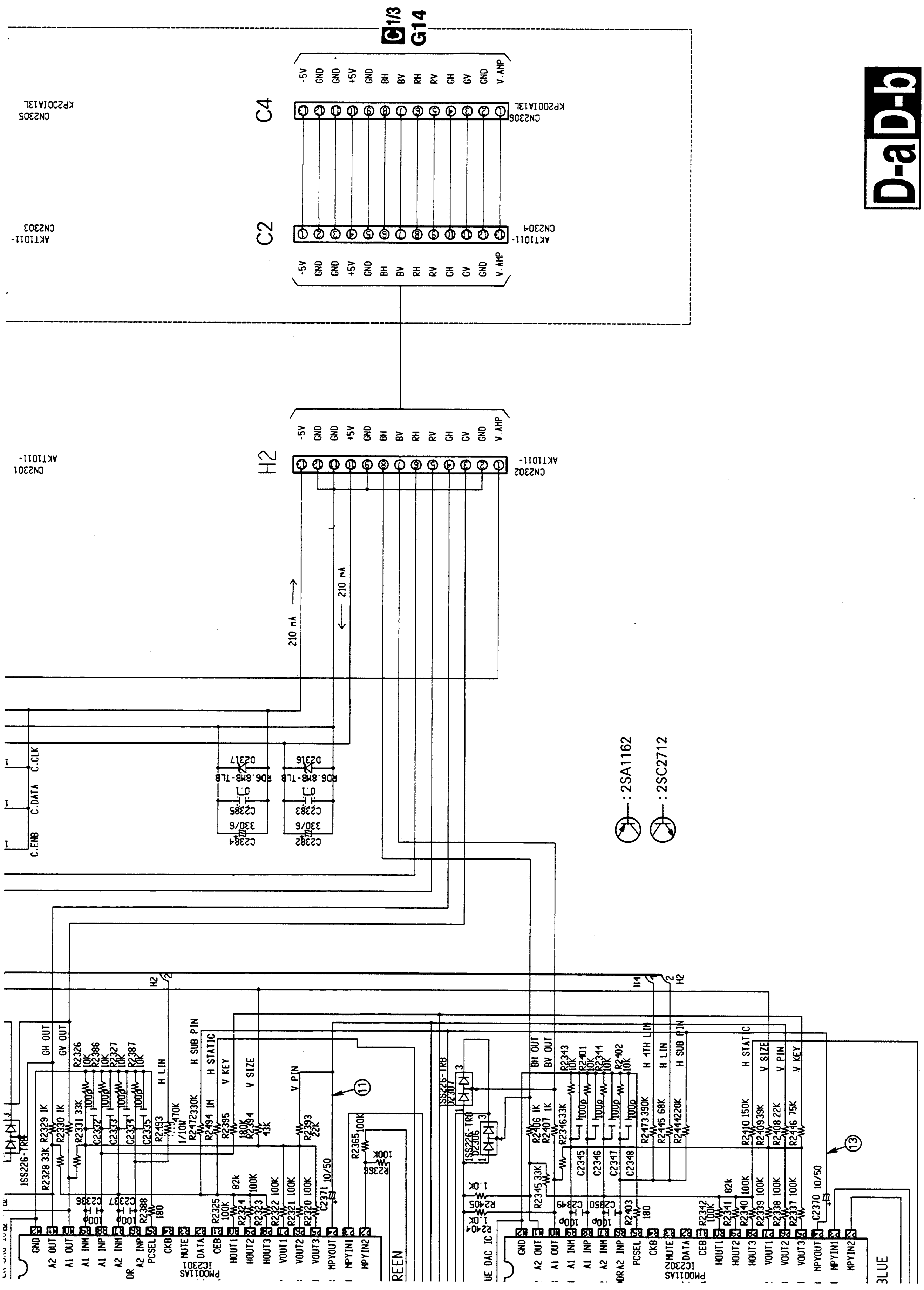
Notes

1. RESISTERS
   (RS):METAL OXIDE FILM RESISTER
   (RT):CEMENT RESISTER
   (RN):METAL FILM RESISTER
   (FL):NON FLAMMABLE RESISTER
   THE OTHERS:FIXED CHIP RESISTORS (1/10 W)
   Figures in pharenttheses
   show the rated wattage.
   Those unspecified ones are of 1/4W.
   K:KΩ ,M:MΩ,Unspecified ones are of Ω

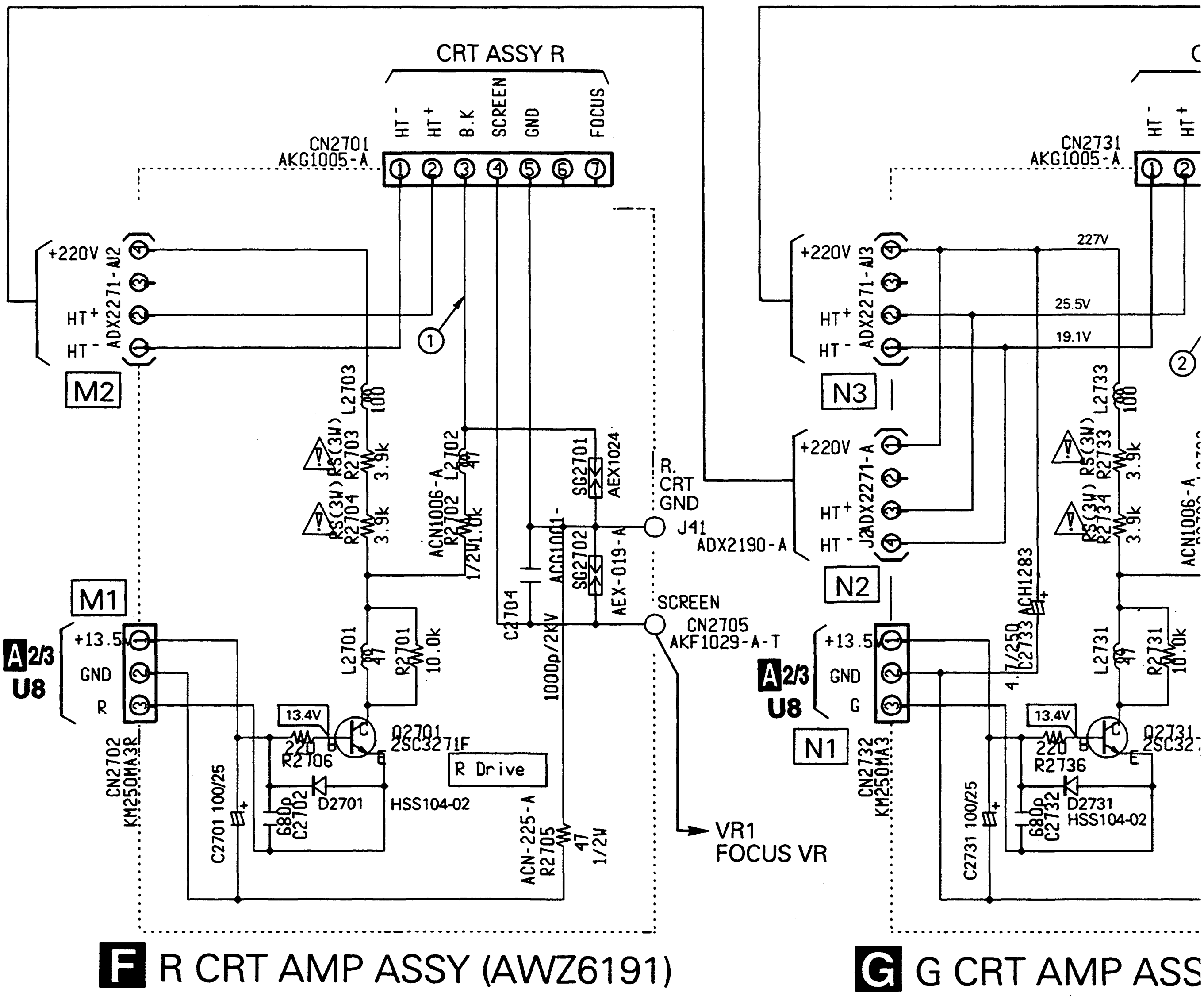
2. CAPACITORS
   (HA):Aluminium electrolytic capasitors
   p:pF,Unspecified ones are of uF
   Capacity/Voltage
   Unspecified ones are of 50V


E CONNECTOR B ASSY
(AWZ6196)
H1
C1
C3
C1/3
G13
MODE.3
MODE.2
MODE.1
C.CLK
C.DATA
C.ENB
V.SIZE.ADJ
V.BLK
CPU.RESET
H.BLK
H.V.PARA
PIN.KEY
CN2301
AKT1011-
AKT1011-
CN2303
CN2305
KP200IA13L
CONTROL
VERGENCE
CTION
ORM
ATOR
0V
GND
C2381 0.1
R2498 10K 1/10W
R2497 3.3K 1/10W
R2499 3.9K 1/10W
R2496 1.0K 1/10W
Q2311
Q2312
R2495 220 1/10W
R2503 1.0K 1/10W
R2502 220 1/10W
D2315 1SS226-TR8
V.SIZE ADJ DC
R2501 15K 1/10W
V1 R2460 5.6K
V2 R2461 470K
V3 R2462 82K
DC R2474 470K
R2465 5.6K
15
IC2304 (1/2) :
V. CONTROL
R2459 220
R2458 220
R2466 3.3K
IC2304 NJM4558MD
-5V
V.AMP
D2311 1SS226-TR8
R2504 0 1/10W
R2454 1.5M
R2447 33K
16
0.8V
R2457 1K
D2310 1SS226-TR8
PIN KEY
5V
C2386 0.1
R2448 220
R2449 220
-0.1V
R2453 100K
R2452 33K
R2456 2.2M
R2451 5.6K
R2450 5.6K
IC2304 NJM4558MD
C2369 0.1
-5V
GND
V1
V2
V3
V4
IC2304 (2/2) :
CORRECTION SIGNAL MIXER
(PIN-KEY)
D2320 1SS226-TR8
D2319 1SS226-TR8
D2318 1SS226-TR8
C.ENB
C.DATA
C.CLK
EN DAC IC
R2389 1.0K
R2390 1.0K
D2304 1SS226-TR8
D2305 1SS226-TR8
GND
A2 OUT
A1 OUT
A1 INM
A1 INP
C2386 100p
R2328 33K
R2329 1K
R2330 1K
R2331 33K
C2332
100p
GH OUT
GV OUT
R2326 10K
R2386 10K

D-a D-b


C1/3
G14
C4
C2
H2
CN2305
KP200IA13L
CN2306
CN2303
AKT1011-
CN2304
CN2301
CN2302
-5V
GND
GND
+5V
GND
BH
BV
RH
RV
GH
GV
GND
V.AMP
210 mA
210 mA
C.CLK
C.DATA
C.ENB
D2317
D2316
RD6.8MB-TLB
C2385
C2383
C2384
C2382
330/6
: 2SA1162
: 2SC2712
GH OUT
GV OUT
H LIN
H SUB PIN
H STATIC
V KEY
V SIZE
V PIN
BH OUT
BV OUT
H 4TH LIN
1SS226-TRB
D2307
D2306
⑪
⑬
C2371 10/50
C2370 10/50
GND
A2 OUT
A1 OUT
A1 INM
A1 INP
A2 INM
A2 INP
PCSEL
CKB
MUTE
DATA
CEB
HOUT1
HOUT2
HOUT3
VOUT1
VOUT2
VOUT3
HPYOUT
HPYIN1
HPYIN2
IC2301
IC2302
PM0011AS
GREEN
BLUE

3.12 R, G AND B CRT AMP ASSEMBLIES


CRT ASSY R
HT⁻ HT⁺ B.K SCREEN GND FOCUS
CN2701
AKG1005-A
+220V
HT⁺
HT⁻
ADX2271-AJ2
M2
①
L2703 100
R2703 RS(3W) 3.9k
R2704 RS(3W) 3.9k
L2702 47
ACN1006-A R2702 1.0k 1/2W
SG2701 AEX1024
SG2702 AEX-019-A
ACG1001-
C2704 1000p/2KV
R. CRT GND
J41
ADX2190-A
SCREEN
CN2705
AKF1029-A-T
VR1 FOCUS VR
M1
A 2/3 U8
+13.5V
GND
R
CN2702 KM250MA3R
L2701 47
R2701 10.0k
13.4V
220 R2706
Q2701 2SC3271F
R Drive
D2701 HSS104-02
C2701 100/25
C2702 680p
ACN-225-A R2705 47 1/2W
F R CRT AMP ASSY (AWZ6191)
CN2731
AKG1005-A
HT⁻ HT⁺
227V
25.5V
19.1V
ADX2271-AJ3
N3
②
+220V
HT⁺
HT⁻
ADX2271-A
J
N2
ACH1283
C2733 4.7/250
L2733 100
R2733 RS(3W) 3.9k
R2734 RS(3W) 3.9k
ACN1006-A
N1
A 2/3 U8
+13.5V
GND
G
CN2732 KM250MA3
L2731 47
R2731 10.0k
13.4V
220 R2736
Q2731 2SC32
D2731 HSS104-02
C2732 680p
C2731 100/25
G G CRT AMP ASS

1. RESISTORS

Indicated in Ω,1/4W,1/8W, 5% tolerance unless otherwise noted

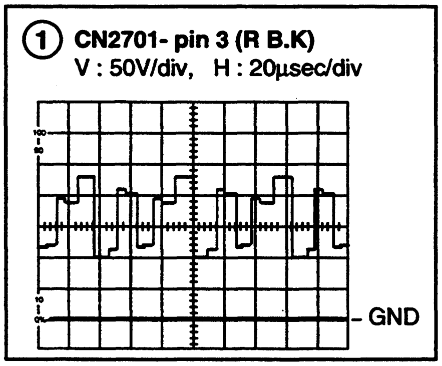
K:kΩ,M:MΩ.

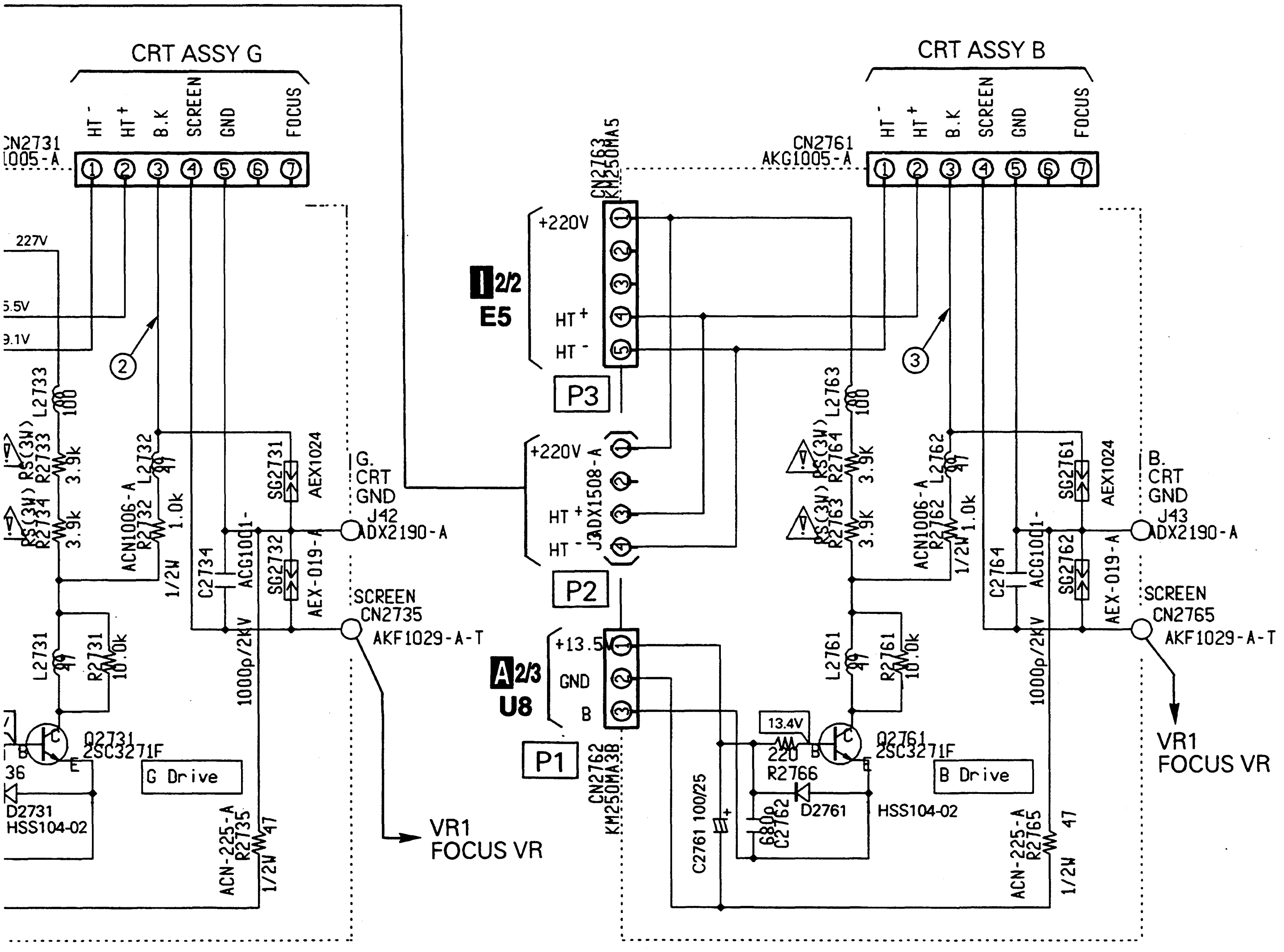
2. CAPACITORS

Indicated in capacity (μF)/voltage (V) unless otherwise noted p:pF.

Indication without voltage is 50V except electrolytic capacitor.

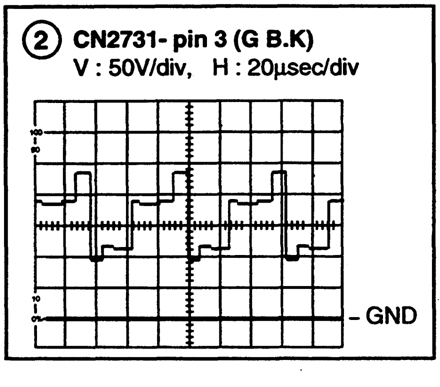
- * C2703,2733,2763 : ACH-378-0
- * C2704,C2734,C2764 : ACG1001-A-F

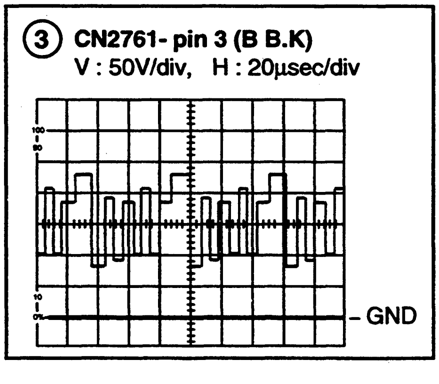

① **CN2701- pin 3 (R B.K)**
V : 50V/div, H : 20μsec/div


CRT ASSY G
HT -
HT +
B.K
SCREEN
GND
FOCUS
CN2731
1005-A
227V
5.5V
9.1V
L2733 100
RS(3W) R2733 3.9k
RS(3W) R2734 3.9k
L2732 47
ACN1006-A R2732 1.0k 1/2W
C2734 1000p/2kV
ACG1001-
SG2731 AEX1024
SG2732 AEX-019-A
G. CRT GND
J42 ADX2190-A
SCREEN CN2735 AKF1029-A-T
VR1 FOCUS VR
L2731 47
R2731 10.0k
Q2731 2SC3271F
G Drive
D2731 HSS104-02
ACN-225-A R2735 47 1/2W
MP ASSY (AWZ6192)
CRT ASSY B
CN2761 AKG1005-A
CN2763 KM250MA5
+220V
HT +
HT -
I 2/2 E5
P3
+220V
HT +
HT -
J3 ADX1508-A
P2
+13.5V
GND
B
A 2/3 U8
P1
CN2762 KM250MA3B
L2763 100
RS(3W) R2764 3.9k
RS(3W) R2763 3.9K
L2762 47
ACN1006-A R2762 1.0k 1/2W
C2764 1000p/2kV
ACG1001-
SG2761 AEX1024
SG2762 AEX-019-A
B. CRT GND
J43 ADX2190-A
SCREEN CN2765 AKF1029-A-T
VR1 FOCUS VR
L2761 47
R2761 10.0k
13.4V
220 R2766
Q2761 2SC3271F
B Drive
D2761 HSS104-02
C2761 100/25
C2762 680p
ACN-225-A R2765 47 1/2W
②
③

MP ASSY (AWZ6192)

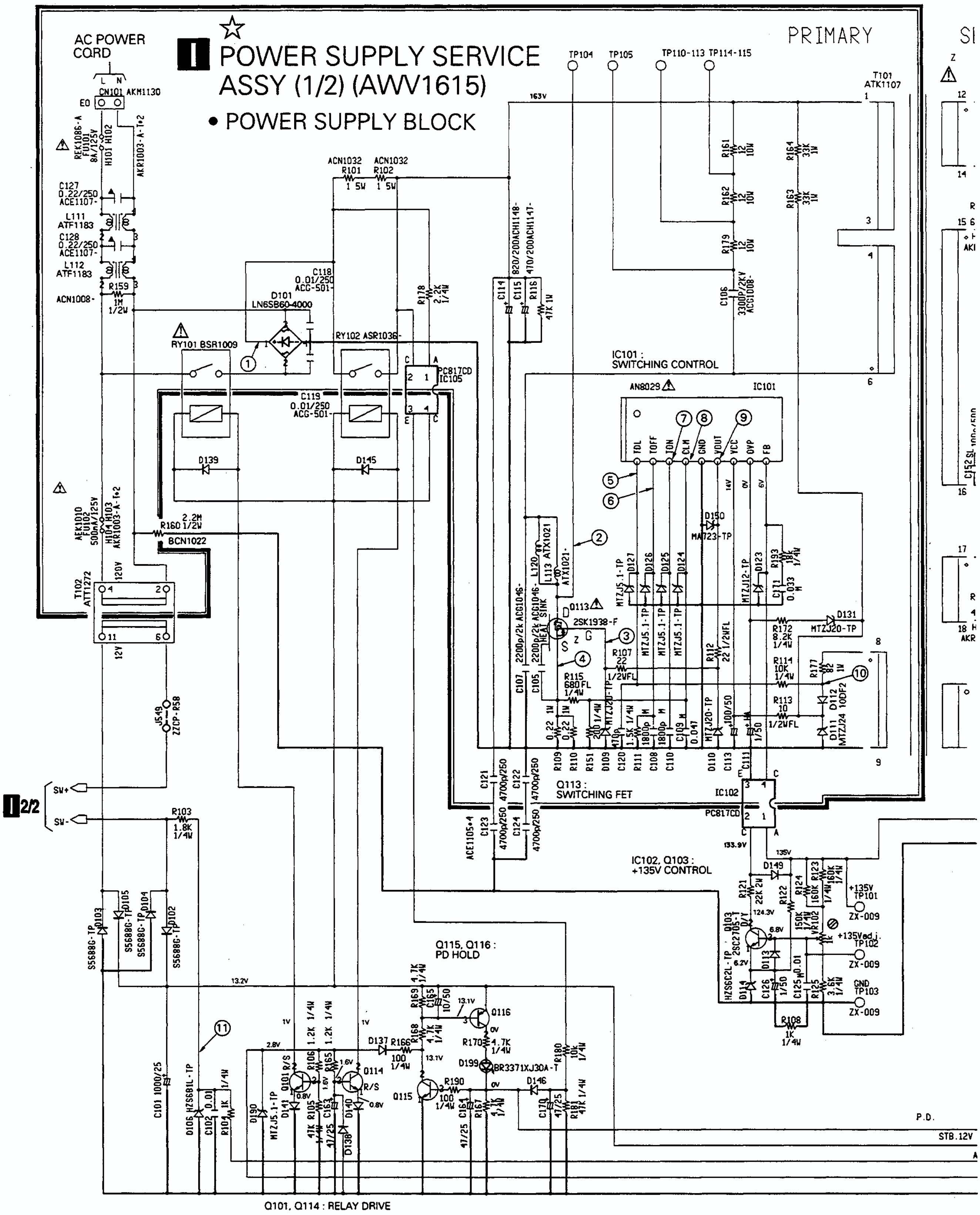
H B CRT AMP ASSY (AWZ6193)

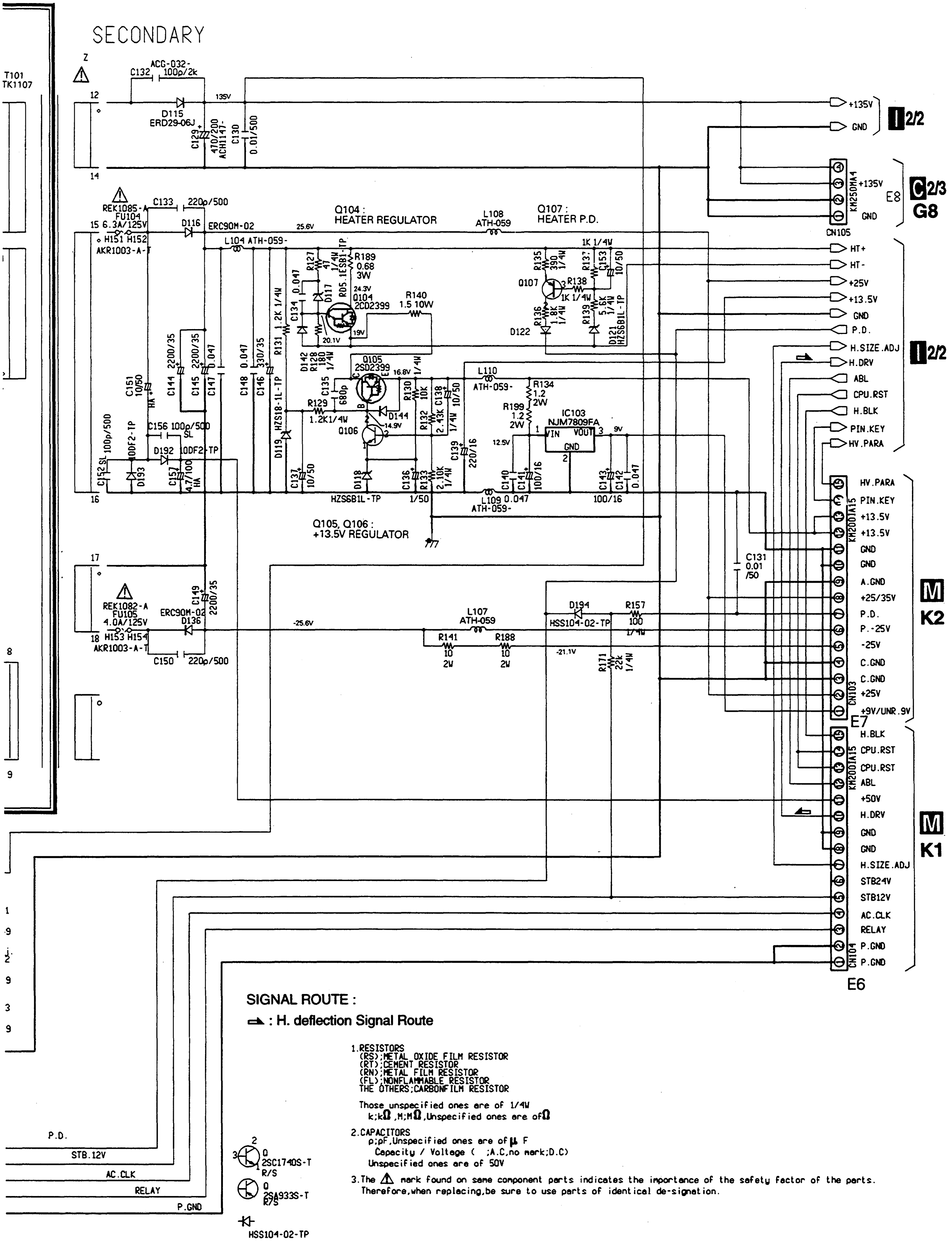

② **CN2731- pin 3 (G B.K)**
V : 50V/div, H : 20μsec/div


③ **CN2761- pin 3 (B B.K)**
V : 50V/div, H : 20μsec/div

3.13 POWER SUPPLY SERVICE ASSY (1/2)

▭ : CHARGED SECTION


PRIMARY
SI
I POWER SUPPLY SERVICE ASSY (1/2) (AWV1615)
• POWER SUPPLY BLOCK
AC POWER CORD
CN101 AKM1130
EO
FU101 REK1086-A 8A/125V
H101 H102 AKR1003-A-1•2
C127 0.22/250 ACE1107-
L111 ATF1183
C128 0.22/250 ACE1107-
L112 ATF1183
R159 1M 1/2W ACN1008-
RY101 BSR1009
RY102 ASR1036-
D101 LN6SB60-4000
C118 0.01/250 ACG-501-
C119 0.01/250 ACG-501-
ACN1032 R101 1 5W
ACN1032 R102 1 5W
PC817CD IC105
D139
D145
FU102 AEK1010 500mA/125V
H104 H103 AKR1003-A-1•2
R160 2.2M 1/2W
BCN1022
T102 ATT1272
120V
12V
J549 ZZCP-R58
SW+
SW-
2/2
R103 1.8K 1/4W
D103 S5688G-TP
D105 S5688G-TP
D104 S5688G-TP
D102 S5688G-TP
13.2V
TP104
TP105
TP110-113
TP114-115
163V
T101 ATK1107
R161 12 10W
R162 12 10W
R179 12 10W
R164 33K 1W
R163 33K 1W
C106 3300P/2KV ACG1008-
R178 2.2K 1/4W
C114 820/200ACH1148-
C115 470/200ACH1147-
R116 47K 1W
IC101 : SWITCHING CONTROL
AN8029
IC101
TDL TOFF TON CLM GND VOUT VCC OVP FB
14V 0V 6V
D150 MA723-TP
L120 L113 ATX1021 ATX1021-
Q113 2SK1938-F
HEAT SINK
D127 D126 D125 D124 MTZJ5.1-TP
D123 MTZJ12-TP
C171 0.033
R193 18K 1/4W
D131 MTZJ20-TP
R172 8.2K 1/4W
R114 10K 1/4W
R177 82 1W
R113 10 1/2WFL
D112 10DF2
D111 MTZJ24
R107 22 1/2WFL
R112 22 1/2WFL
R115 680FL 1/4W
C107 2200p/2k ACG1046-
C105 2200p/2k ACG1046-
R109 0.22 1W
R110 0.22 1W
R151 2.2 1/4W
D109 MTZJ20-TP
C120 470p
R111 1.5K 1/4W
C108 1800p
C110 1800p
C109 0.047
D110 MTZJ20-TP
C113 100/50
C111 1/50
C121 4700p/250
C122 4700p/250
C123 4700p/250
C124 4700p/250
ACE1105-4
Q113 : SWITCHING FET
IC102 PC817CD
133.9V
135V
IC102, Q103 : +135V CONTROL
D149
R121 22K 2W
R122 150K 1/4W
R124 160K 1/4W
R123 160K 1/4W
VR102 1K
124.3V
6.8V
6.2V
Q103 2SC2705-T
D113
D114 HZS6C2L-TP
C126 1/50
C125 0.01
R125 3.6K 1/4W
R108 1K 1/4W
+135V TP101 ZX-009
+135V adj. TP102 ZX-009
GND TP103 ZX-009
Q115, Q116 : PD HOLD
R169 4.7K 1/4W
C165 10/50
Q116
13.1V
R168 4.7K 1/4W
R170 4.7K 1/4W
D137 R166 100 1/4W
D199 BR3371XJ30A-T
R180 10K 1/4W
Q115
R190 100 1/4W
C164 47/25
R167 4.7K 1/4W
D146
C170 47/25
R181 47K 1/4W
Q101 R/S
Q114 R/S
R106 1.2K 1/4W
R165 1.2K 1/4W
D141 MTZJ5.1-TP
R105 47K 1/4W
C163 47/25
D140
D138
D190
2.8V
1V
1.6V
0.8V
C101 1000/25
D106 HZS6B1L-TP
C102 0.01
R104 1K 1/4W
Q101, Q114 : RELAY DRIVE
P.D.
STB.12V
A
Z
R
AKI
AKR
C152
1 3 4 6 8 9 12 14 15 16 17 18
① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⑩ ⑪


SECONDARY
T101
TK1107
C132 100p/2k
ACG-032-
D115
ERD29-06J
C129 470/200 ACH1147-
C130 0.01/500
135V
+135V
GND
I 2/2
+135V
GND
KM250MA4
CN105
E8
C 2/3
G8
REK1085-A
FU104
6.3A/125V
H151 H152
AKR1003-A-T
C133 220p/500
D116
ERC90M-02
25.6V
Q104 : HEATER REGULATOR
L108 ATH-059
Q107 : HEATER P.D.
L104 ATH-059-
R127 47 1/4W
R189 0.68 3W
RD5.1ESB1-TP
D117
C134 0.047
Q104 2CD2399
R140 1.5 10W
24.3V
19V
20.1V
R131 1.2K 1/4W
D142
R128 180 1/4W
Q105 2SD2399
16.8V
R130 10K 1/4W
C135 680p
R129 1.2K1/4W
D144
-14.9V
Q106
R132 2.43K 1/4W
C138 10/50
L110 ATH-059-
R134 1.2 2W
R199 1.2 2W
IC103 NJM7809FA
VIN VOUT GND
12.5V
9V
R135 390 1/4W
R137 1K 1/4W
C153 10/50
Q107
R138 1K 1/4W
R136 1.8K 1/4W
R139 5.6K 1/4W
D122
D121 HZS6B1L-TP
HT+
HT-
+25V
+13.5V
GND
P.D.
H.SIZE.ADJ
H.DRV
ABL
CPU.RST
H.BLK
PIN.KEY
HV.PARA
I 2/2
C151 10/50 HA
C144 2200/35
C145 2200/35
C147 0.047
C148 0.047
C146 330/35
D119 HZS18-1L-TP
C152 100p/500 SL
D193 10DF2-TP
C156 100p/500 SL
D192 10DF2-TP
C157 4.7/100 HA
C137 10/50
D118 HZS6B1L-TP
C136 1/50
R133 2.10K 1/4W
C139 220/16
L109 0.047 ATH-059-
C140 C141 100/16
C143 C142 0.047 100/16
Q105, Q106 : +13.5V REGULATOR
C131 0.01 /50
HV.PARA
PIN.KEY
+13.5V
+13.5V
GND
GND
A.GND
+25/35V
P.D.
P.-25V
-25V
C.GND
C.GND
+25V
+9V/UNR.9V
KM200TA15
CN103
E7
M K2
REK1082-A
FU105
4.0A/125V
H153 H154
AKR1003-A-T
C149 2200/35
ERC90M-02
D136
C150 220p/500
-25.6V
L107 ATH-059
R141 10 2W
R188 10 2W
D194
HSS104-02-TP
R157 100 1/4W
-21.1V
R171 22k 1/4W
H.BLK
CPU.RST
CPU.RST
ABL
+50V
H.DRV
GND
GND
H.SIZE.ADJ
STB24V
STB12V
AC.CLK
RELAY
P.GND
P.GND
KM200TA15
CN104
E6
M K1
P.D.
STB.12V
AC.CLK
RELAY
P.GND
12
14
15
16
17
18
2SC1740S-T R/S
2SA933S-T R/S
HSS104-02-TP

SIGNAL ROUTE :

➡ : H. deflection Signal Route

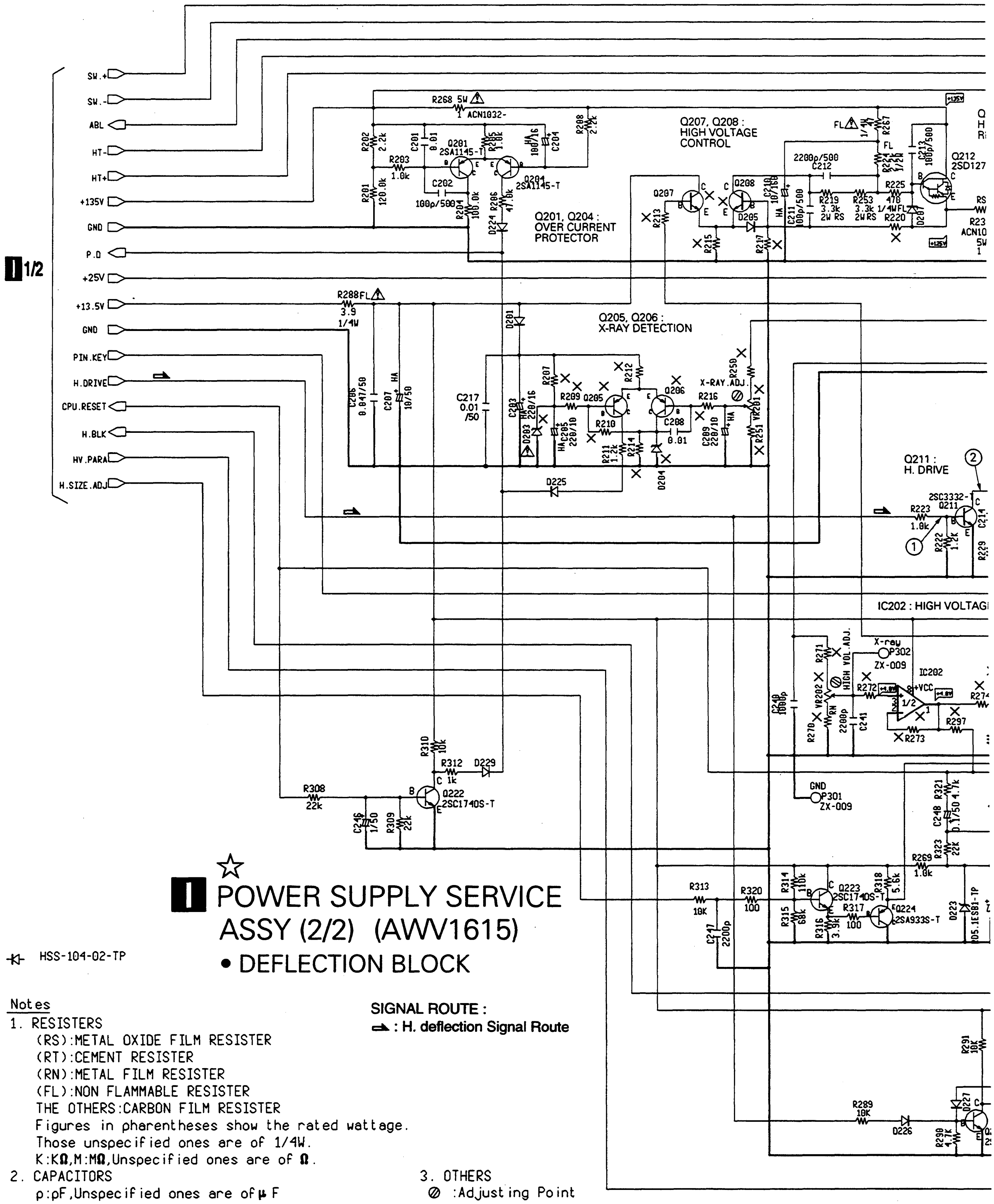
1.RESISTORS
(RS):METAL OXIDE FILM RESISTOR
(RT):CEMENT RESISTOR
(RN):METAL FILM RESISTOR
(FL):NONFLAMMABLE RESISTOR
THE OTHERS:CARBONFILM RESISTOR

Those unspecified ones are of 1/4W
k;kΩ ,M;MΩ,Unspecified ones are of Ω

2.CAPACITORS
p;pF,Unspecified ones are of μ F
Capacity / Voltage (;A.C,no mark;D.C)
Unspecified ones are of 50V

3.The ⚠ mark found on some component parts indicates the importance of the safety factor of the parts.
Therefore,when replacing,be sure to use parts of identical de-signation.

3.14 POWER SUPPLY SERVICE ASSY (2/2)


I 1/2
SW.+
SW.-
ABL
HT-
HT+
+135V
GND
P.D
+25V
+13.5V
GND
PIN.KEY
H.DRIVE
CPU.RESET
H.BLK
HV.PARA
H.SIZE.ADJ
R268 5W ⚠
ACN1032-
R202 2.2k
C201 0.01
Q201 2SA1145-T
R205 1.8k
HA 100/16 C204
R208 2.2k
R203 1.0k
C202 100p/500
Q204 2SA1145-T
R201 120.0k
R204 100.0k
R206 47.0k
D224
Q201, Q204 : OVER CURRENT PROTECTOR
Q207, Q208 : HIGH VOLTAGE CONTROL
Q207
Q208
R213
R215
D205
R217
C210 10/160
C211 100p/500
2200p/500 C212
R219 3.3k 2W RS
R253 3.3k 2W RS
R225 470 1/4W FL
R220
R224 2.2k 1/2W
R267 1/4W FL
C213 100p/500
D207
Q212 2SD127
R23 ACN10 5W
+125V
R288 FL ⚠ 3.9 1/4W
D201
Q205, Q206 : X-RAY DETECTION
C206 0.047/50
C207 HA 10/50
C217 0.01 /50
C203 HA 220/16
D203
C205 HA 220/10
R207
R209
Q205
R210
R211 1.2k
R214
R212
Q206
C208 0.01
R216
C209 220/10
X-RAY.ADJ.
R250
VR201
R251
D204
D225
Q211 : H. DRIVE
2SC3332-T Q211
R223 1.0k
R222 1.2k
C214
R229
IC202 : HIGH VOLTAGE
X-ray P302 ZX-009
R271
HIGH VOL.ADJ.
VR202 RN
R270
C240 100p
2200p C241
R272
IC202
+VCC
1/2
R273
R274
R297
GND P301 ZX-009
R310 10k
R312 1k
D229
Q222 2SC1740S-T
R308 22k
C246 1/50
R309 22k
R321 4.7k
C248 0.1/50
R323 22k
R269 1.0k
R313 10K
C247 2200p
R320 100
R314 10k
R315 68k
R316 3.9k
Q223 2SC1740S-T
R318 5.6k
R317 100
Q224 2SA933S-T
D223 DS.1ESB1-TP
R291 10K
R289 10K
D226
R290 4.7K
D227
Q
H
① ②

☆

I POWER SUPPLY SERVICE ASSY (2/2) (AWV1615)

• DEFLECTION BLOCK

⊣⊢ HSS-104-02-TP

Notes
1. RESISTERS
   (RS):METAL OXIDE FILM RESISTER
   (RT):CEMENT RESISTER
   (RN):METAL FILM RESISTER
   (FL):NON FLAMMABLE RESISTER
   THE OTHERS:CARBON FILM RESISTER
   Figures in pharentheses show the rated wattage.
   Those unspecified ones are of 1/4W.
   K:KΩ,M:MΩ,Unspecified ones are of Ω.
2. CAPACITORS
   p:pF,Unspecified ones are of μF
   Capacity/Voltage
   Unspecified ones are of 50V

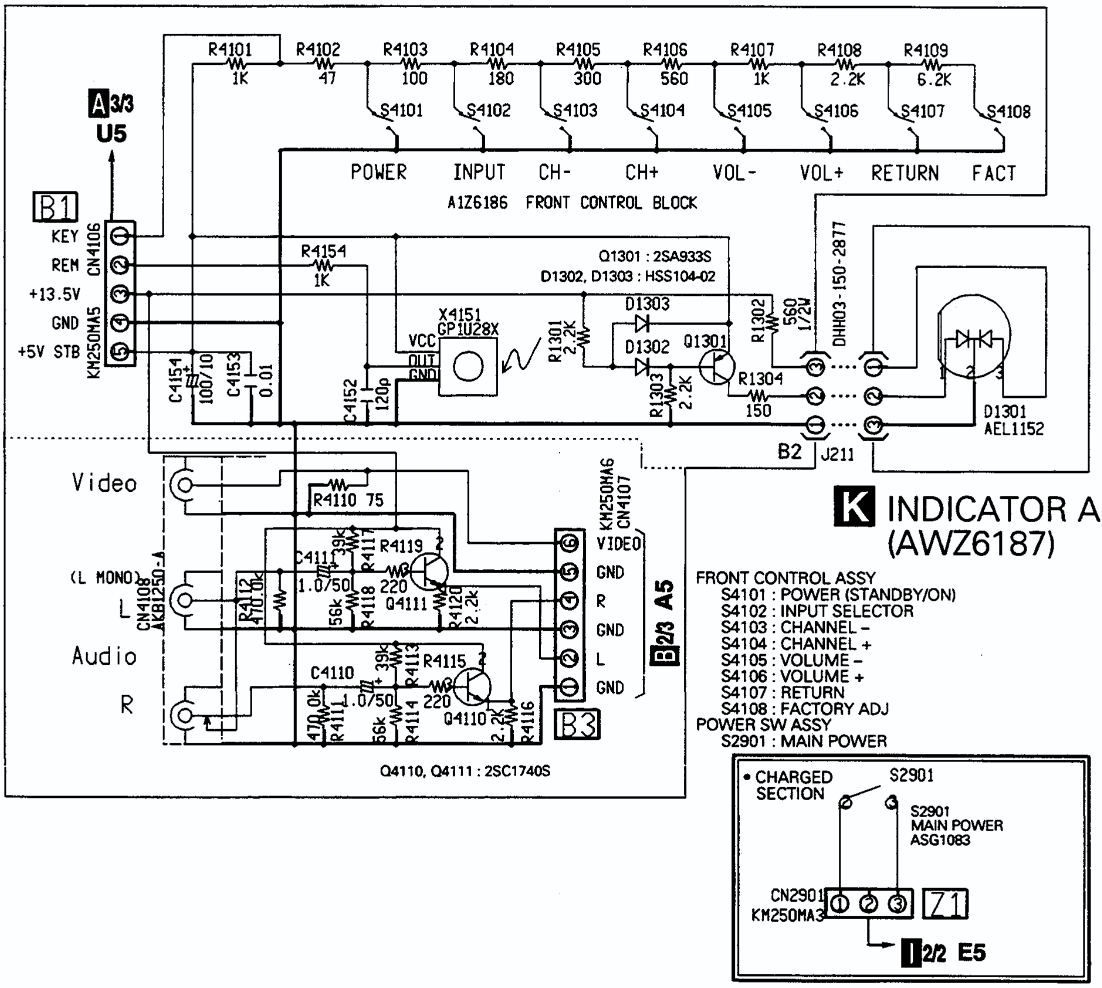
SIGNAL ROUTE :

➡ : H. deflection Signal Route

3. OTHERS
   ⊘ :Adjusting Point
   The ⚠ mark found on same component parts indicates the importance of the safety factor of the part. Therefore,when replacing,be sure to use parts of identical designation.

3.15 FRONT CONTROL, INDICATOR, POWER SW AND CONNECTOR A ASSEMBLIES

J FRONT CONTROL ASSY (AWZ6186)

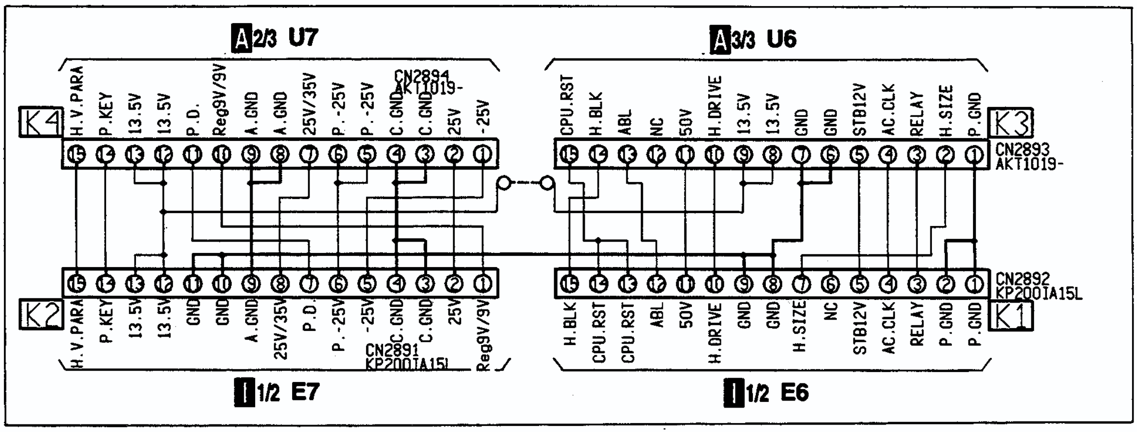

R4101 1K
R4102 47
R4103 100
R4104 180
R4105 300
R4106 560
R4107 1K
R4108 2.2K
R4109 6.2K
S4101
S4102
S4103
S4104
S4105
S4106
S4107
S4108
POWER
INPUT
CH-
CH+
VOL-
VOL+
RETURN
FACT
A1Z6186 FRONT CONTROL BLOCK
A 3/3 U5
B1
KEY
REM
+13.5V
GND
+5V STB
CN4106
KM250MA5
R4154 1K
Q1301 : 2SA933S
D1302, D1303 : HSS104-02
X4151 GP1U28X
VCC
OUT
GND
R1301 2.2K
D1303
D1302
Q1301
R1302 560 1/2V
DHH03-150-2877
R1303 2.2K
R1304 150
D1301 AEL1152
B2
J211
C4154 100/10
C4153 0.01
C4152 120p
Video
R4110 75
(L MONO)
L
Audio
R
CN4108 AKB1250-A
C4111 1.0/50
R4117 39k
R4119 220
Q4111
R4118 56k
R4120 2.2k
R4112 470.0k
C4110 1.0/50
R4113 39k
R4115 220
Q4110
R4111 470.0k
R4114 56k
R4116 2.2k
KM250MA6 CN4107
VIDEO
GND
R
GND
L
GND
B 2/3 A5
B3
Q4110, Q4111 : 2SC1740S
• CHARGED SECTION
S2901
S2901 MAIN POWER ASG1083
CN2901 KM250MA3
Z1
I 2/2 E5

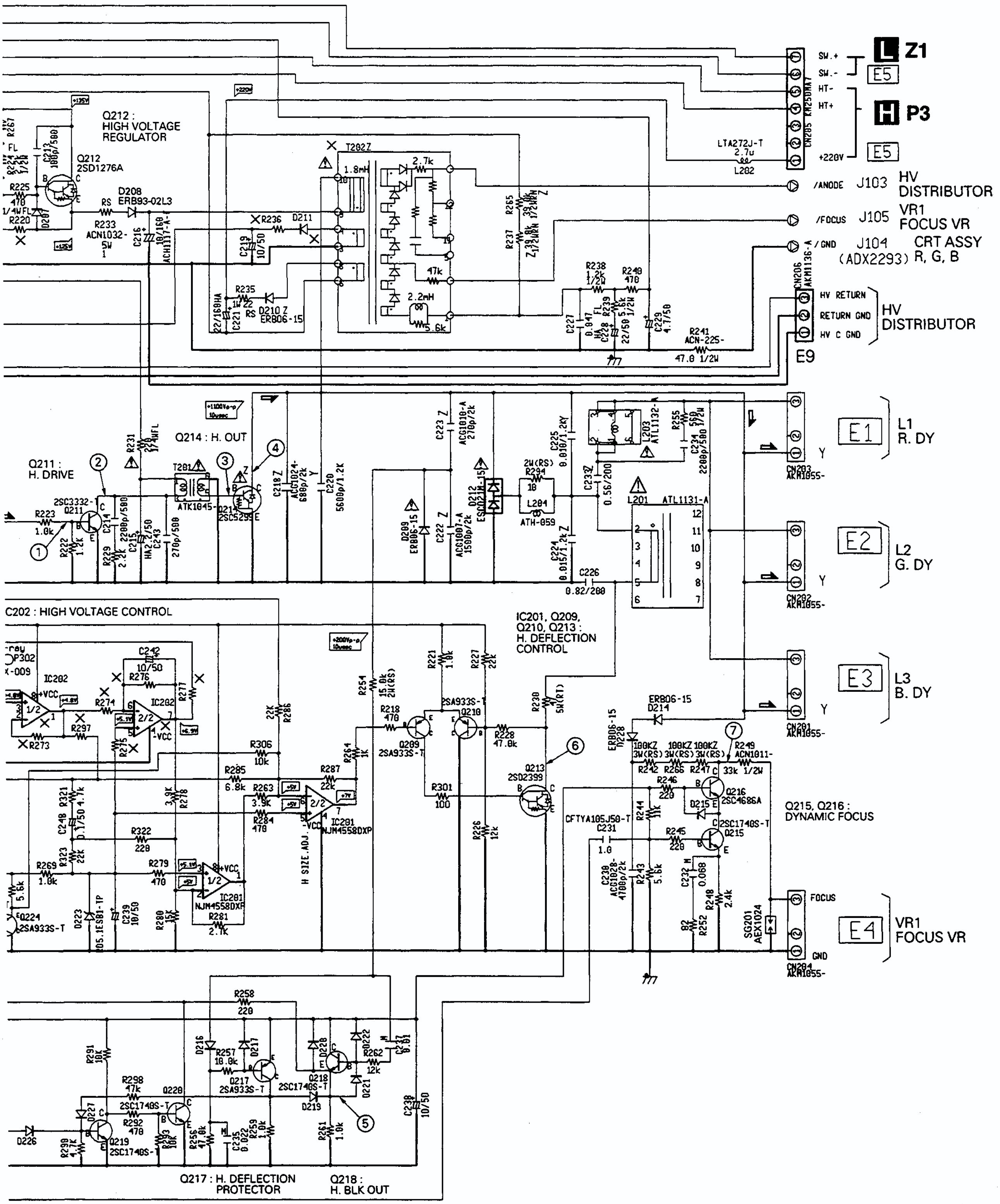
K INDICATOR ASSY (AWZ6187)

FRONT CONTROL ASSY
S4101 : POWER (STANDBY/ON)
S4102 : INPUT SELECTOR
S4103 : CHANNEL –
S4104 : CHANNEL +
S4105 : VOLUME –
S4106 : VOLUME +
S4107 : RETURN
S4108 : FACTORY ADJ
POWER SW ASSY
S2901 : MAIN POWER

L POWER SW ASSY (AWZ6188)

M CONNECTOR A ASSY (AWZ6189)


A 2/3 U7
A 3/3 U6
K4
H.V.PARA
P.KEY
13.5V
13.5V
P.D.
Reg9V/9V
A.GND
A.GND
25V/35V
P.-25V
P.-25V
C.GND
C.GND
25V
-25V
CN2894 AKT1019-
CPU.RST
H.BLK
ABL
NC
50V
H.DRIVE
13.5V
13.5V
GND
GND
STB12V
AC.CLK
RELAY
H.SIZE
P.GND
K3
CN2893 AKT1019-
CN2892 KP200IA15L
K1
K2
H.V.PARA
P.KEY
13.5V
13.5V
GND
GND
A.GND
25V/35V
P.D.
P.-25V
P.-25V
C.GND
C.GND
25V
Reg9V/9V
CN2891 KP200IA15L
H.BLK
CPU.RST
CPU.RST
ABL
50V
H.DRIVE
GND
GND
H.SIZE
NC
STB12V
AC.CLK
RELAY
P.GND
P.GND
I 1/2 E7
I 1/2 E6

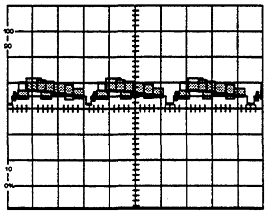

Z1
E5
P3
E5
SW.+
SW.-
HT-
HT+
+220V
CN205 KR250NA7
LTA272J-T 2.7u L202
Q212 : HIGH VOLTAGE REGULATOR
Q212 2SD1276A
D208 ERB93-02L3
R233 ACN1032- 5W
T202Z
1.8mH
2.7k
47k
2.2mH
5.6k
R265 39.0k
R237 39.0k
J103 HV DISTRIBUTOR
/ANODE
J105 VR1 FOCUS VR
/FOCUS
J104 CRT ASSY (ADX2293) R, G, B
/GND
CN206 AKM1136-A
HV RETURN
RETURN GND
HV C GND
HV DISTRIBUTOR
E9
R241 ACN-225- 47.0 1/2W
R238 1.2k 1/2W
R240 470
D210 Z ERB06-15
R235
R236
D211
Q211 : H. DRIVE
2SC3332-
Q211
R223 1.0k
T201
ATK1045-
Q214 : H. OUT
2SC5299
Q214
L201 ATL1131-A
L203 ATL1132-
L204 ATH-059
R294 10
D212 ESC02M-15
D209 ERB06-15
C226 0.82/200
C225 0.010/1.2k
C224 0.015/1.2k
C233 0.56/200
C220 5600p/1.2k
E1 L1 R. DY
CN203 AKM1055-
E2 L2 G. DY
CN202 AKM1055-
E3 L3 B. DY
CN201 AKM1055-
Y
IC202 : HIGH VOLTAGE CONTROL
IC202
1/2
2/2
IC201, Q209, Q210, Q213 : H. DEFLECTION CONTROL
IC201 NJM4558DXP
Q209 2SA933S-T
Q210 2SA933S-T
Q213 2SD2399
H SIZE.ADJ
R230 5K(RT)
ERB06-15 D214
D228 ERB06-15
R242 R266 R247 100KZ 3W(RS)
R249 ACN1011- 33k 1/2W
Q216 2SC4686A
Q215 2SC1740S-T
Q215, Q216 : DYNAMIC FOCUS
CFTYA105J50-T C231 1.0
SG201 AEX1024
FOCUS
GND
E4 VR1 FOCUS VR
CN204 AKM1055-
Q224 2SA933S-T
D223 05.1ESB1-1P
Q217 : H. DEFLECTION PROTECTOR
Q218 : H. BLK OUT
Q217 2SA933S-T
Q218 2SC1740S-T
Q219 2SC1740S-
Q220 2SC1740S-T
R258 220
D226
① ② ③ ④ ⑤ ⑥ ⑦

3.16 WAVEFORMS AND VOLTAGES

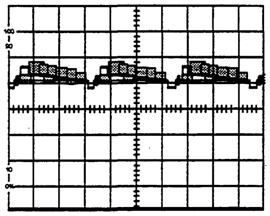
A 1/3 TUNER • VIDEO ASSY (1/3)
• TUNER BLOCK

- Input signal : 9ch (Air 187.25MHz)
- Video signal : Color bar (87.5% Mod., 1kHZ ±25kHz dev.), 60dBμ input
- Range : DC range (Unless otherwise noted)

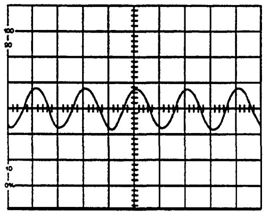
① **TV FRONT END pin 18 (VI)**
V : 1V/div, H : 20μsec/div



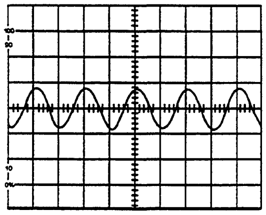
② **J697 (TV V1)**
V : 1V/div, H : 20μsec/div



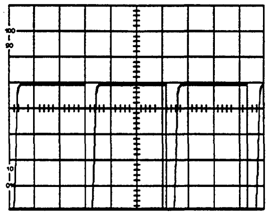
③ **D4508 Cathode (TV L)**
V : 1V/div, H : 0.5msec/div



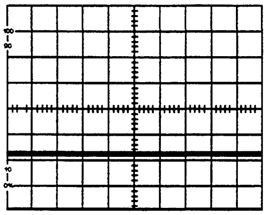
④ **D4509 Cathode (TV R)**
V : 1V/div, H : 0.5msec/div



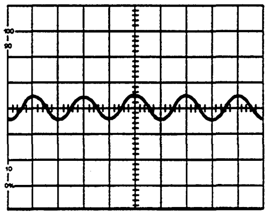
⑤ **Foot of R4538 (H SYNC 1)**
V : 1V/div, H : 20μsec/div



⑥ **Q4502 Emitter (AFT 1)**
V : 1V/div, H : 20μsec/div



⑦ **J704 (MPX)**
V : 1V/div, H : 0.5msec/div



TV FRONT END (AXF1084)

Pin No.	Voltage (V)	Pin No.	Voltage (V)
1	5.4	10	NC
2	5.4	11	0
3	GND	12	0
4	–	13	9
5	–	14	4.5
6	9	15	GND
7	5	16	2.2
8	NC	17	NC
9	33	18	4.7

IC4501 (CXA1734S)

Pin No.	Voltage (V)	Pin No.	Voltage (V)	Pin No.	Voltage (V)	Pin No.	Voltage (V)
1	–	10	5.2	19	4	28	4
2	–	11	4	20	4	29	4
3	GND	12	4.4	21	4	30	NC
4	GND	13	4	22	1.8		
5	1.3	14	4	23	4		
6	1.3	15	9	24	4		
7	4	16	3	25	4		
8	4	17	GND	26	2		
9	6.4	18	4	27	1.3		

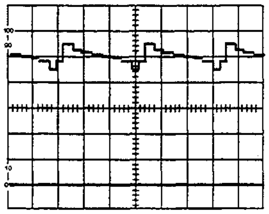
A 2/3 TUNER • VIDEO ASSY (2/3)
• VIDEO BLOCK

IC501 (TA8845BN)

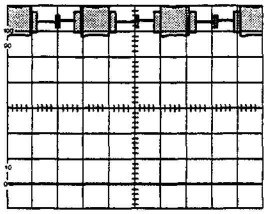
Pin No.	Voltage (V)	Pin No.	Voltage (V)	Pin No.	Voltage (V)	Pin No.	Voltage (V)	Pin No.	Voltage (V)	Pin No.	Voltage (V)	Pin No.	Voltage (V)	Pin No.	Voltage (V)
1	0	9	0	17	0	25	0	33	0	41	9.3	49	0	57	4.8
2	0	10	5.4	18	3.4	26	1.7	34	5.5	42	6.3	50	6.5	58	4.8
3	5.2	11	0.8	19	3.6	27	0	35	5.5	43	9.2	51	4.9	59	5
4	7.2	12	7.1	20	3.5	28	0	36	0	44	0	52	6.5	60	0
5	NC	13	1.1	21	12.5	29	4.5	37	9.2	45	0	53	5.7	61	2.6
6	2.4	14	0	22	0	30	4.4	38	9.2	46	9.1	54	3.3	62	4.4
7	8.7	15	4.2	23	0	31	4.5	39	4.9	47	3.1	5	8.7	63	0
8	2.1	16	4.2	24	0	32	1.9	40	6.2	48	12.5	56	4.8	64	0

- Input signal : Color bar (87.5% Mod., 1kHZ ± 25kHz dev.)
- Picture quality : STANDARD
- Range : DC range (Unless otherwise noted)

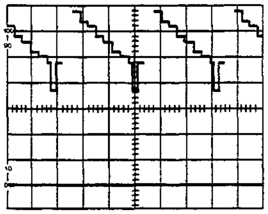
① **IC501-pin 58**
V : 1V/div, H : 20μsec/div



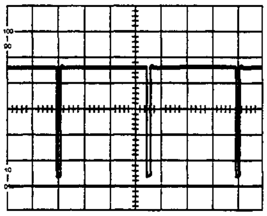
② **D540 Anode**
V : 0.5V/div, H : 20μsec/div



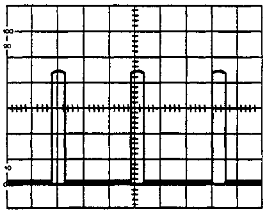
③ **IC501-pin 61**
V : 0.5V/div, H : 20μsec/div



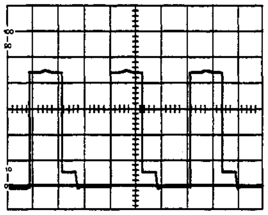
④ **IC501-pin 62**
V : 0.1V/div, H : 5msec/div



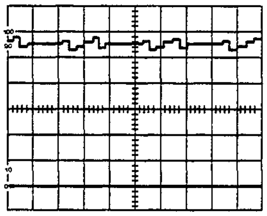
⑤ **D519 Cathode**
V : 1V/div, H : 20μsec/div



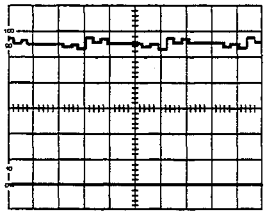
⑥ **D509 Cathode**
V : 1V/div, H : 20μsec/div



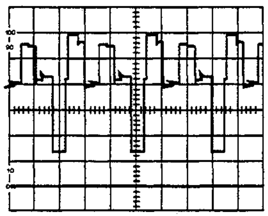
⑦ **D523 Cathode**
V : 1V/div, H : 20μsec/div



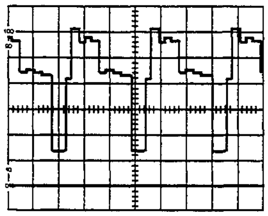
⑧ **D524 Cathode**
V : 1V/div, H : 20μsec/div



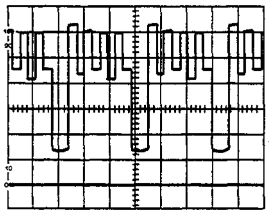
⑨ **Q533 Collector**
V : 1V/div, H : 20μsec/div



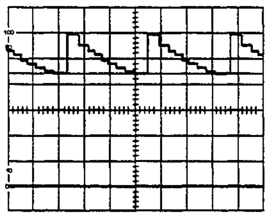
⑩ **Q532 Collector**
V : 1V/div, H : 20μsec/div



⑪ **Q531 Collector**
V : 1V/div, H : 20μsec/div



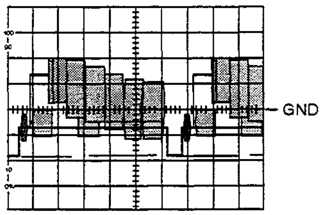
⑫ **Q509 Base**
V : 1V/div, H : 20μsec/div



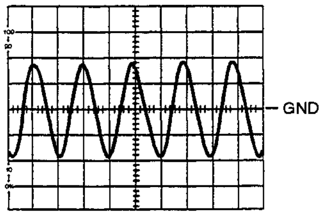
B 2/3 AV I/O ASSY (2/3)

- AV I/O, Y/C SEP, S INPUT AND SUB WOOFER BLOCKS

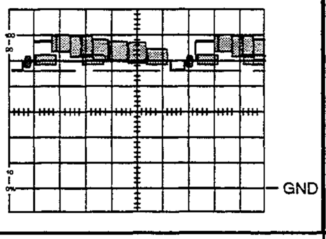
① **MONITOR OUT VIDEO**
V : 0.5V/div, H : 10msec/div



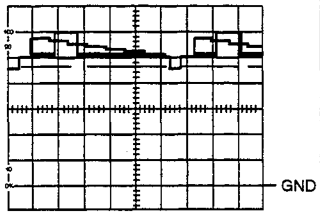
② **MONITOR OUT L ch**
V : 0.5V/div, H : 10msec/div



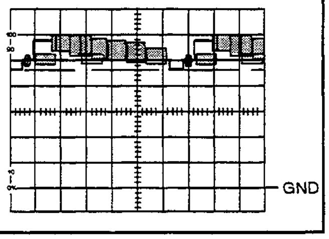
③ **F3201- VIDEO IN**
V : 1V/div, H : 10msec/div



④ **F3201- Y OUT**
V : 1V/div, H : 10msec/div



⑤ **F3201- C OUT**
V : 1V/div, H : 10msec/div



IC3201
(MC14066BF)

Pin No.	Voltage (V)	Pin No.	Voltage (V)
1	4.3	8	8.4
2	4.3	9	8.4
3	4.3	10	8.4
4	5.4	11	8.4
5	0	12	12.2
6	0	13	12.2
7	0	14	12.2

IC1602
(BA7644AN)

Pin No.	Voltage (V)
1	7.5
2	0.2
3	0.2
4	7.5
5	0
6	7.5
7	12.2
8	7.5
9	0
10	6.1

IC1603
(BA7644AN)

Pin No.	Voltage (V)
1	7.5
2	0
3	0
4	7.5
5	0
6	7.5
7	12.2
8	7.5
9	0
10	6.1

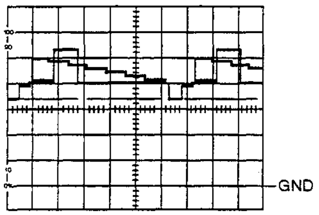
IC1601
(TC4052BF)

Pin No.	Voltage (V)	Pin No.	Voltage (V)
1	6.8	9	0.2
2	7.2	10	0.2
3	6.8	11	7.2
4	7.1	12	6.9
5	7.2	13	6.9
6	0	14	7.2
7	0	15	7.2
8	0	16	12.2

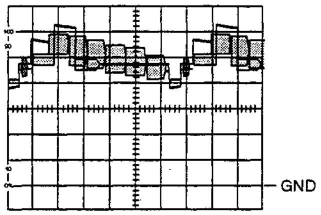
B 3/3 AV I/O ASSY (3/3)

- P IN P, V-CHIP AND CNR BLOCKS

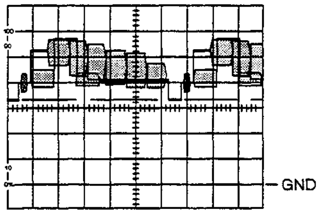
① **IC3003-pin 1**
V : 0.5V/div, H : 10msec/div



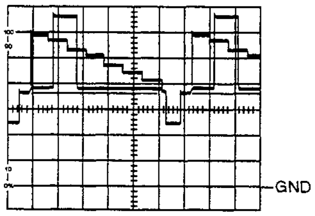
② **IC3003-pin 3**
V : 0.5V/div, H : 10msec/div



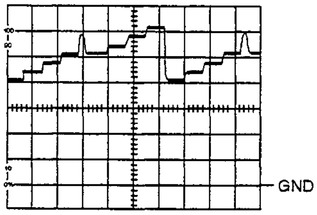
③ **IC3003-pin 56**
V : 0.5V/div, H : 10msec/div



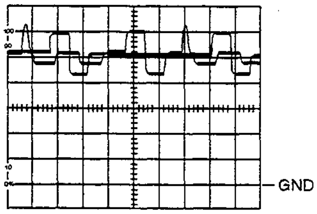
④ **IC3002-pin 6**
V : 0.5V/div, H : 10msec/div



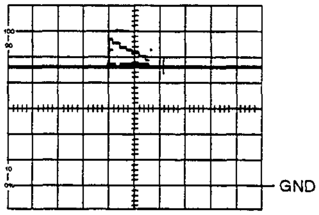
⑤ **IC3002-pin 8**
V : 0.5V/div, H : 10msec/div



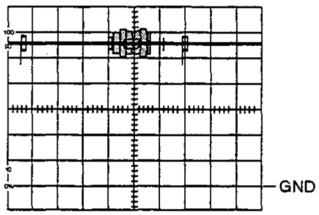
⑥ **IC3002-pin 10**
V : 0.5V/div, H : 10msec/div



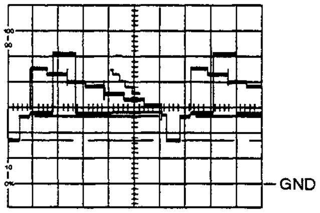
⑦ **IC3003-pin 28**
V : 0.5V/div, H : 10msec/div



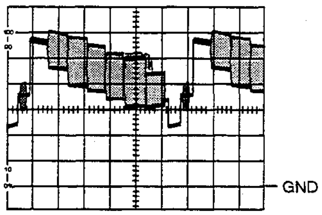
⑧ **IC3003-pin 25**
V : 0.5V/div, H : 10msec/div



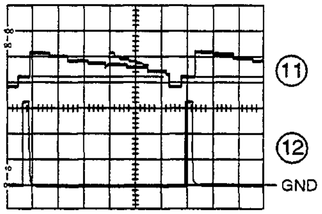
⑨ **IC3003-pin 17**
V : 0.5V/div, H : 10msec/div



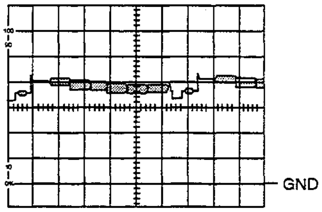
⑩ **IC3003-pin 15**
V : 0.5V/div, H : 10msec/div



⑪ **Upper : Q3011 Emitter**
⑫ **Lower : IC3301-pin 10**
V : 1V/div, H : 10msec/div



⑬ **A3-pin 3 (C OUT)**
V : 2V/div, H : 10msec/div



IC3002 (HD49420FS)

Pin No.	Voltage (V)	Pin No.	Voltage (V)	Pin No.	Voltage (V)	Pin No.	Voltage (V)	Pin No.	Voltage (V)	Pin No.	Voltage (V)	Pin No.	Voltage (V)	Pin No.	Voltage (V)
1	0	11	1.8	21	2.5	31	2.3	41	–	51	–	61	–	71	4.1
2	1.5	12	0	22	2.5	32	5.1	42	–	52	–	62	–	72	0.1
3	5.1	13	5.1	23	5.1	33	–	43	–	53	–	63	–	73	–
4	1.5	14	5.1	24	4.6	34	5.1	44	–	54	–	64	–	74	4.1
5	3.4	15	5.1	25	2.5	35	5	45	–	55	–	65	–	75	2.4(*3) 2 (*4)
6	2.3	16	2.5	26	3.7	36	5	46	–	56	–	66	–	76	0
7	4.2 (*1) 0 (*2)	17	2.6	27	3.6	37	4.7	47	–	57	–	67	–	77	2.5
8	2.6	18	5.1	28	0	38	–	48	5	58	–	68	–	78	2.4
9	5.2	19	3.7	29	2.5	39	–	49	–	59	–	69	–	79	0
10	2.6	20	3.6	30	0	40	–	50	–	60	–	70	–	80	2.1

Note ; (*1) : Main picture display ON, (*2) : Main picture display OFF
(*3) : Sub picture display ON, (*4) : Sub picture display OFF

IC3003 (HA11579)

Pin No.	Voltage (V)	Pin No.	Voltage (V)	Pin No.	Voltage (V)	Pin No.	Voltage (V)	Pin No.	Voltage (V)	Pin No.	Voltage (V)	Pin No.	Voltage (V)
1	2.1	9	3.6	17	1.7	25	2.7	33	1.7	41	0.5(*1) 1.9(*2)	49	1.6
2	0	10	3.5	18	3	26	0	34	2.5	42	–	50	0
3	2.5	11	2.6	19	–	27	2.3	35	3	43	–	51	4.9
4	0	12	3.8	20	5.1	28	2.3	36	4.2	44	4.3	52	1.6
5	5.2	13	2.6	21	0	29	2.5	37	2.3	45	0	53	–
6	0	14	2.8	22	2.8	30	2.5	38	2.4	46	0	54	4.4
7	1.9	15	2.2	23	2	31	3.2	39	–	47	0	55	–
8	1.9	16	1.6	24	5.1	32	3.2	40	0.5(*1) 1.9(*2)	48	–	56	2.3

Note ; (*1) : Main picture display ON
(*2) : Main picture display OFF

IC3301 (MC14011BF)

Pin No.	Voltage (V)
1	4
2	1
3	4
4	4
5	1
6	1
7	0
8	4.7
9	4.7
10	0.1
11	0.4
12	4.4
13	4.4
14	4.8

IC3006 (TC4538BF)

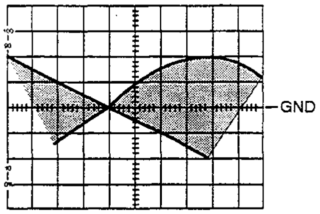
Pin No.	Voltage (V)
1	0
2	5
3	5.1
4	0
5	5
6	0
7	5
8	0
9	5
10	0
11	5
12	0
13	5.1
14	5
15	0
16	5.1

C 1/3 AMP ASSY (1/3)

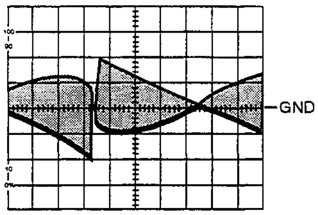
• CONVER AMP AND V. DEFLECTION BLOCKS

- Input signal :Color bar
- Picture quality : STANDARD
- Range : DC range (Unless otherwise noted)

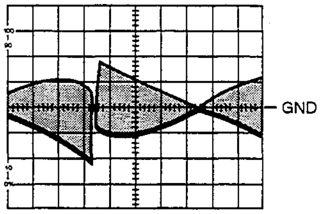
① **G6 pin 6 (SVR)**
V : 0.5V/div, H : 2msec/div



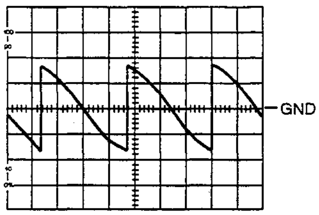
③ **G5 pin 6 (SVR)**
V : 0.5V/div, H : 2msec/div



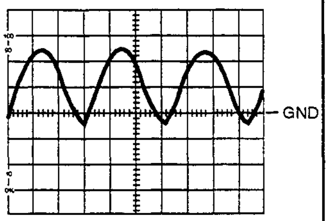
⑤ **G4 pin 6 (SVR)**
V : 0.5V/div, H : 2msec/div



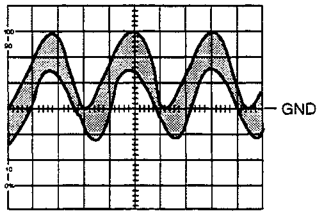
⑦ **G4 pin 2 (VR)**
V : 0.5V/div, H : 5msec/div



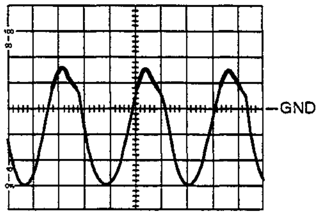
② **G6 pin 4 (SHR)**
V : 0.5V/div, H : 20μsec/div



④ **G5 pin 4 (SHR)**
V : 0.2V/div, H : 20μsec/div



⑥ **G4 pin 4 (SHR)**
V : 0.2V/div, H : 20μsec/div



D CONVER CONTROL ASSY

IC2301 (PM0011AS)

Pin No.	Voltage (V)	Pin No.	Voltage (V)	Pin No.	Voltage (V)
1	0	15	0	29	0.1
2	-1	16	-0.8	30	0.1
3	0	17	0	31	5
4	-1	18	-1	32	4
5	0	19	0	33	5
6	-0.4	20	-0.5	34	5
7	0	21	5	35	0
8	5	22	-0.5	36	0
9	-4.8	23	0	37	0
10	5	24	0.1	38	0.1
11	5	25	-0.1	39	0.1
12	4	26	0.1	40	0.1
13	5	27	0.1	41	0.1
14	-2	28	0.1	42	0.1

IC2302 (PM0011AS)

Pin No.	Voltage (V)	Pin No.	Voltage (V)	Pin No.	Voltage (V)
1	0	15	0	29	0.1
2	-1	16	-0.8	30	0.1
3	0	17	0	31	5
4	-1	18	-1	32	4
5	0	19	0	33	5
6	-0.4	20	-0.5	34	5
7	0	21	5	35	0
8	5	22	0	36	0
9	-4.8	23	0	37	0
10	5	24	0.1	38	0
11	5	25	-0.2	39	0
12	4	26	0.1	40	0
13	5	27	0.1	41	-0.4
14	-2	28	0.1	42	0

IC2303 (PM0011AS)

Pin No.	Voltage (V)	Pin No.	Voltage (V)	Pin No.	Voltage (V)
1	0	15	0	29	0.1
2	-1	16	-0.8	30	-0.1
3	0	17	0	31	5
4	-1	18	-1	32	4
5	0	19	0	33	5
6	-0.4	20	-0.5	34	5
7	0	21	5	35	0
8	5	22	-0.5	36	0
9	-4.8	23	-0.4	37	0
10	5	24	0.2	38	0
11	5	25	-0.2	39	0
12	4	26	0.1	40	0.1
13	5	27	0.1	41	0.6
14	-2	28	0.1	42	0

IC2307 (PA0053B)

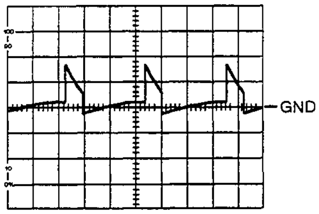
Pin No.	Voltage (V)	Pin No.	Voltage (V)	Pin No.	Voltage (V)
1	0.4	7	-1	13	0.3
2	1.1	8	0	14	1.2
3	5	9	-4.9	15	0
4	0	10	0.2	16	-2.1
5	-1	11	0.5	17	1.2
6	0	12	-1	18	-1.5

IC2308 (PA0053B)

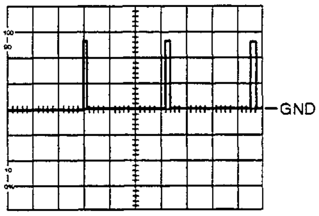
Pin No.	Voltage (V)	Pin No.	Voltage (V)	Pin No.	Voltage (V)
1	0.2	7	-1.1	13	0.4
2	1.2	8	0	14	1.2
3	5	9	-4.9	15	0
4	0	10	0.2	16	-0.6
5	-0.8	11	0.5	17	1.2
6	0	12	-0.8	18	-1.5

- Input signal : Color bar
- Picture quality : STANDARD
- Range : DC range (Unless otherwise noted)

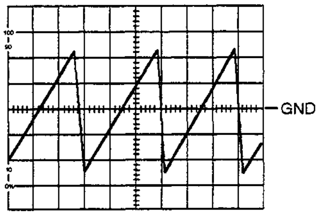
① **D2301 Anode**
V : 2V/div, H : 20μsec/div



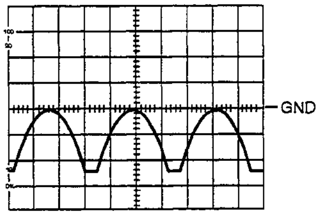
② **Between R2314 and R2315**
V : 2V/div, H : 5msec/div



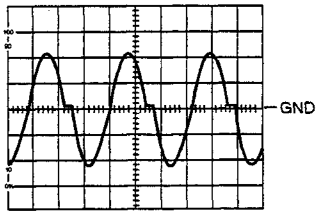
③ **Q2304 Base**
V : 0.5V/div, H : 20μsec/div



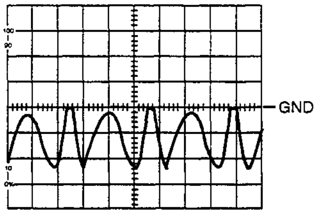
④ **Q2302 Base**
V : 1V/div, H : 20μsec/div



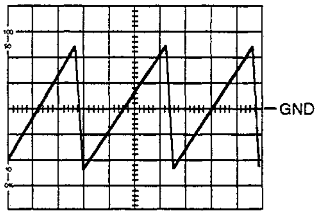
⑤ **IC2307-pin 6**
V : 0.5V/div, H : 20μsec/div



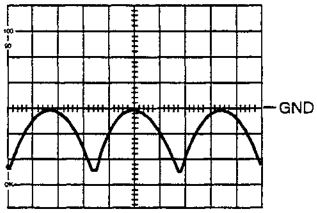
⑥ **IC2307-pin 7**
V : 1V/div, H : 20μsec/div



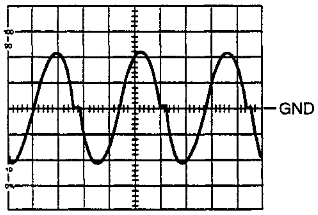
⑦ **Q2306 Base**
V : 0.5V/div, H : 5msec/div



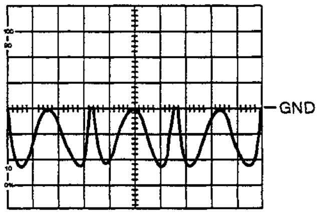
⑧ **Q2308 Base**
V : 1V/div, H : 5msec/div



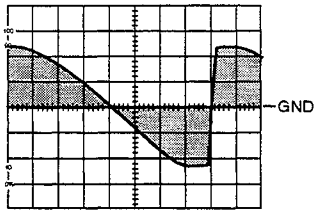
⑨ **IC2308-pin 6**
V : 0.5V/div, H : 5msec/div



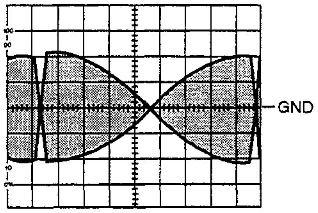
⑩ **IC2308-pin 7**
V : 1V/div, H : 5msec/div



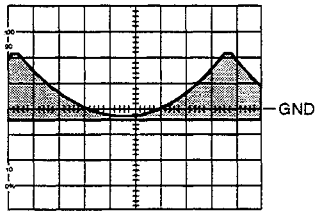
⑪ **C2371 ⊖ side**
V : 0.5V/div, H : 2msec/div



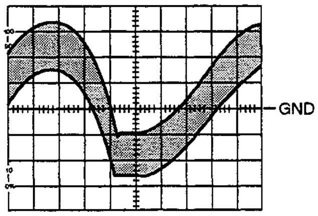
⑫ **C2363 ⊖ side**
V : 0.5V/div, H : 2msec/div



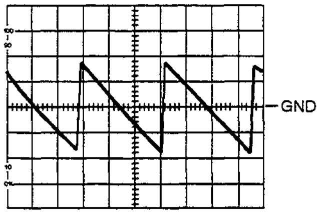
⑬ **C2370 ⊖ side**
V : 0.5V/div, H : 2msec/div



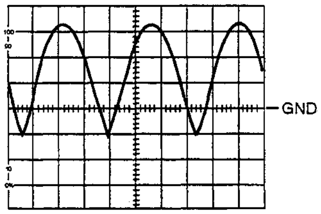
⑭ **IC2305-pin 1**
V : 1V/div, H : 2msec/div



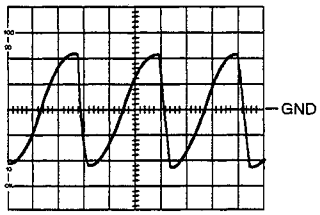
⑮ **IC2304-pin 1**
V : 0.5V/div, H : 5msec/div



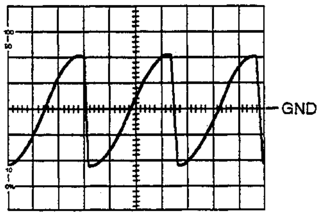
⑯ **IC2304-pin 7**
V : 0.5V/div, H : 5msec/div



⑰ **IC2306-pin 7**
V : 0.5V/div, H : 20μsec/div



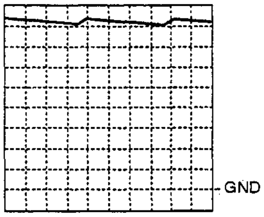
⑱ **IC2306-pin 1**
V : 0.5V/div, H : 5msec/div



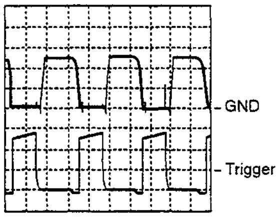
I 1/2 POWER SUPPLY SERVICE ASSY (1/2)

• POWER SUPPLY BLOCK

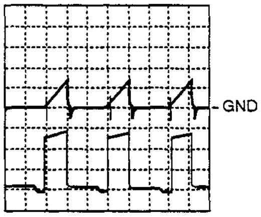
① **D101-pin 1**
V : 20V/div, H : 2nsec/div



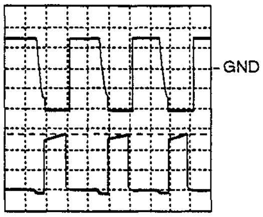
⑤ **IC101-pin 1**
V : 1V/div, H : 5μsec/div



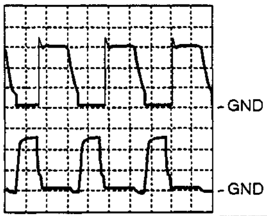
⑦ **IC101-pin 3**
V : 0.5V/div, H : 5μsec/div



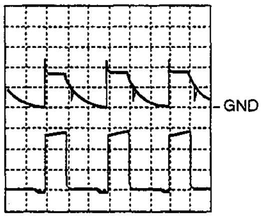
⑩ **D112 Anode**
V : 10V/div, H : 5μsec/div



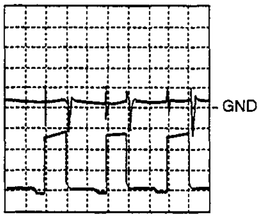
② **Upper : Q113 Drain**
V : 100V/div, H : 5μsec/div
③ **Lower : Q113 Gate**
V : 5V/div, H : 5μsec/div



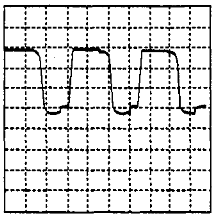
⑥ **IC101-pin 2**
V : 0.5V/div, H : 5μsec/div



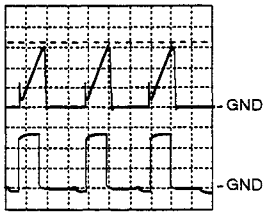
⑧ **IC101-pin 4**
V : 0.2V/div, H : 5μsec/div



⑪ **D106 Cathode**
V : 2V/div, H : 5msec/div



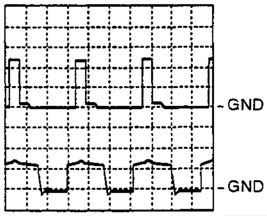
④ **Upper : Q113 Source**
V : 0.2V/div, H : 5μsec/div
⑨ **Lower : IC101-pin 6** (Trigger)
V : 5V/div, H : 5μsec/div



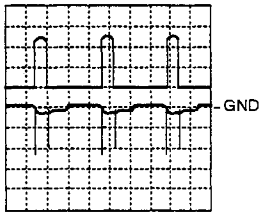
I 2/2 POWER SUPPLY SERVICE ASSY (2/2)

• DEFLECTION BLOCK

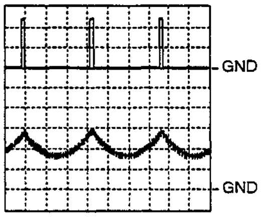
⑤ **Upper : Q218 Emitter**
V : 5V/div, H : 20μsec/div
① **Lower : Q211 Base**
V : 0.5V/div, H : 20μsec/div



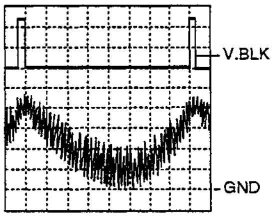
③ **Q214 Base**
V : 5V/div, H : 20μsec/div



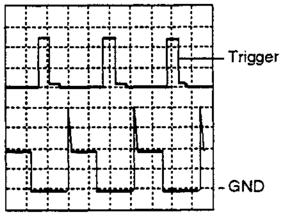
⑥ **Upper : V. BLK (Trigger)**
Lower : Q213 Collector
V : 10V/div, H : 5msec/div



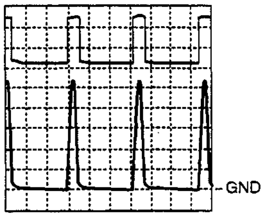
⑦-2/2 **Q216 Collector**
V : 200V/div, H : 20μsec/div



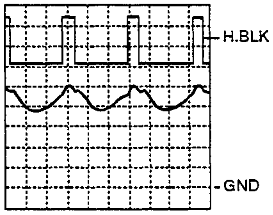
② **Q211 Collector**
V : 20V/div, H : 20μsec/div



④ **Q214 Collector**
V : 200V/div, H : 20μsec/div



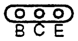
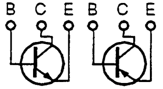
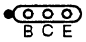
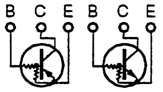
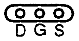
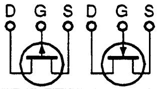
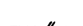
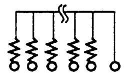
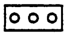
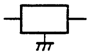
⑦-1/2 **Q216 Collector**
V : 200V/div, H : 20μsec/div



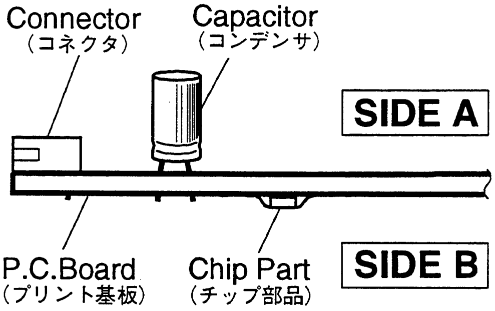
4. PCB CONNECTION DIAGRAM

NOTE FOR PCB DIAGRAMS :

1. Part numbers in PCB diagrams match those in the schematic diagrams.
2. A comparison between the main parts of PCB and schematic diagrams is shown below.

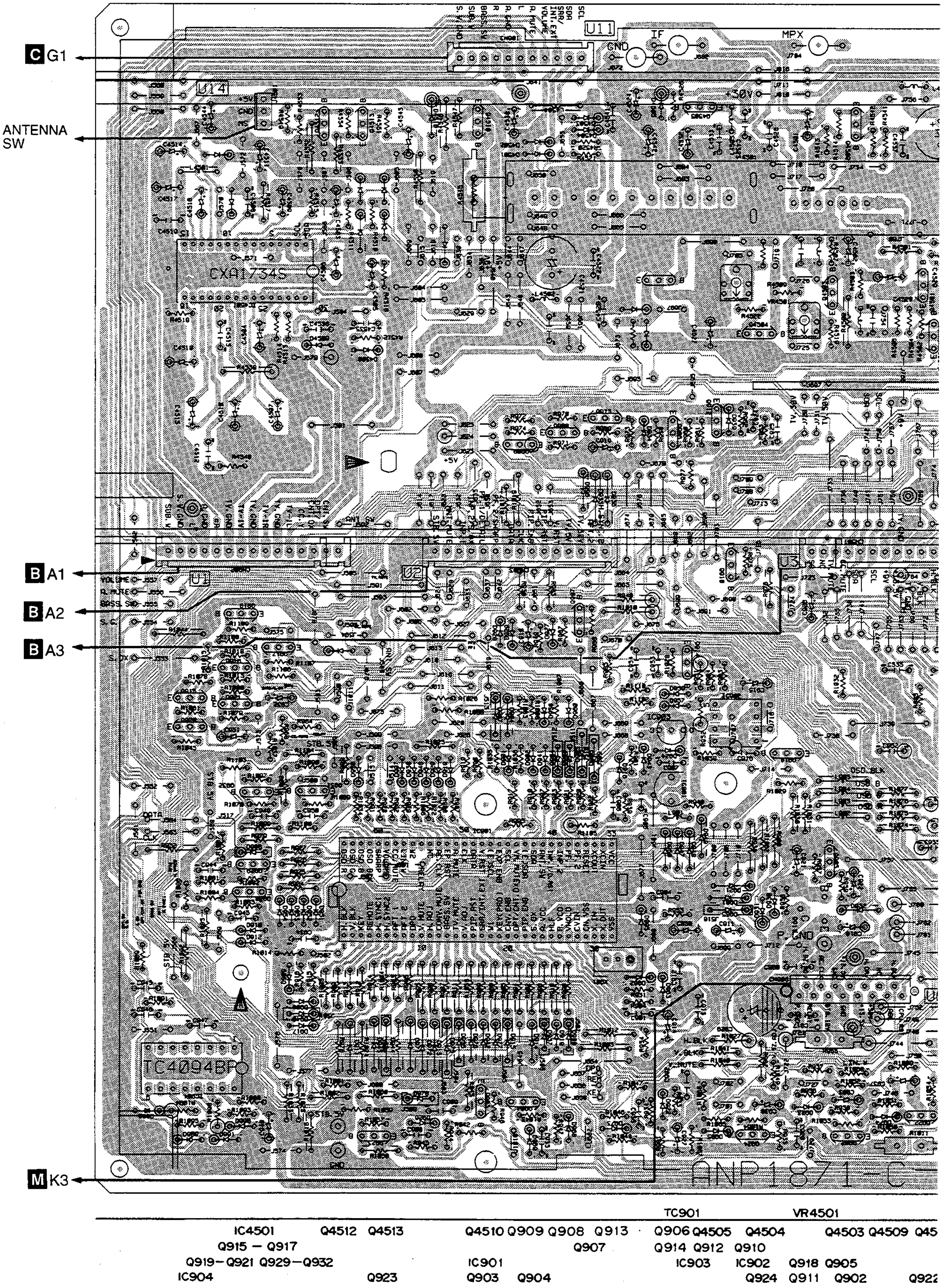
Symbol In PCB Diagrams	Symbol In Schematic Diagrams	Part Name
		Transistor
		Transistor with resistor
		Field effect transistor
		Resistor array
		3-terminal regulator

3. The parts mounted on this PCB include all necessary parts for several destinations.
   For further information for respective destinations, be sure to check with the schematic diagram.
4. View point of PCB diagrams.

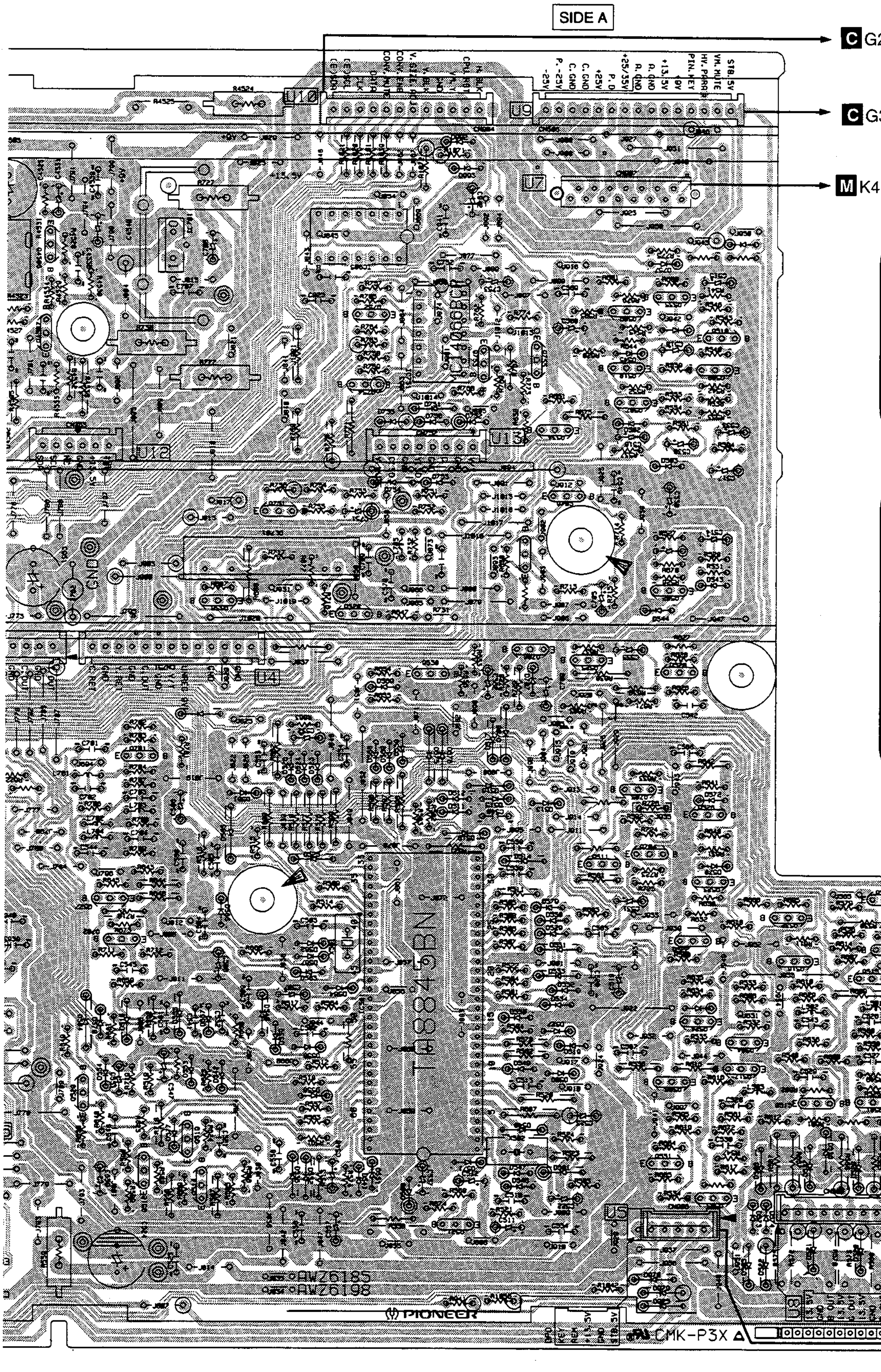

Connector
(コネクタ)
Capacitor
(コンデンサ)
SIDE A
P.C.Board
(プリント基板)
Chip Part
(チップ部品)
SIDE B

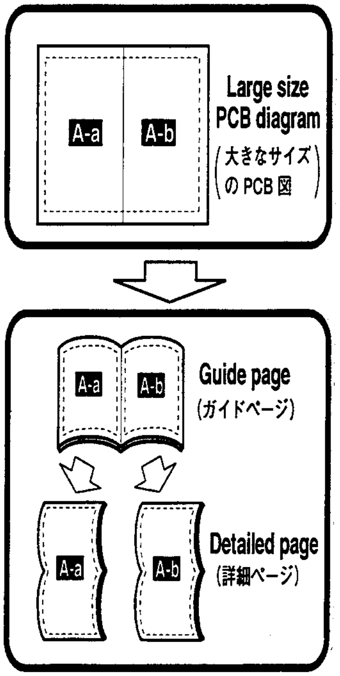
4.1 TUNER · VIDEO ASSY (GUIDE PAGE)

A TUNER • VIDEO ASSY


C G1
ANTENNA SW
B A1
B A2
B A3
M K3
U11
IF
MPX
GND
+30V
U14
CXA1734S
U1
U2
U3
YOLUME
R.MUTE
BASS SW
S.C.
S.DX
OSD_BLK
P.GND
TC4094BF
GND
ANP1871-C
TC901
VR4501
IC4501
Q4512 Q4513
Q4510 Q909 Q908 Q913
Q906 Q4505 Q4504
Q4503 Q4509 Q45
Q915 – Q917
Q907
Q914 Q912 Q910
Q919–Q921 Q929–Q932
IC901
IC903 IC902 Q918 Q905
IC904
Q923
Q903 Q904
Q924 Q911 Q902
Q922

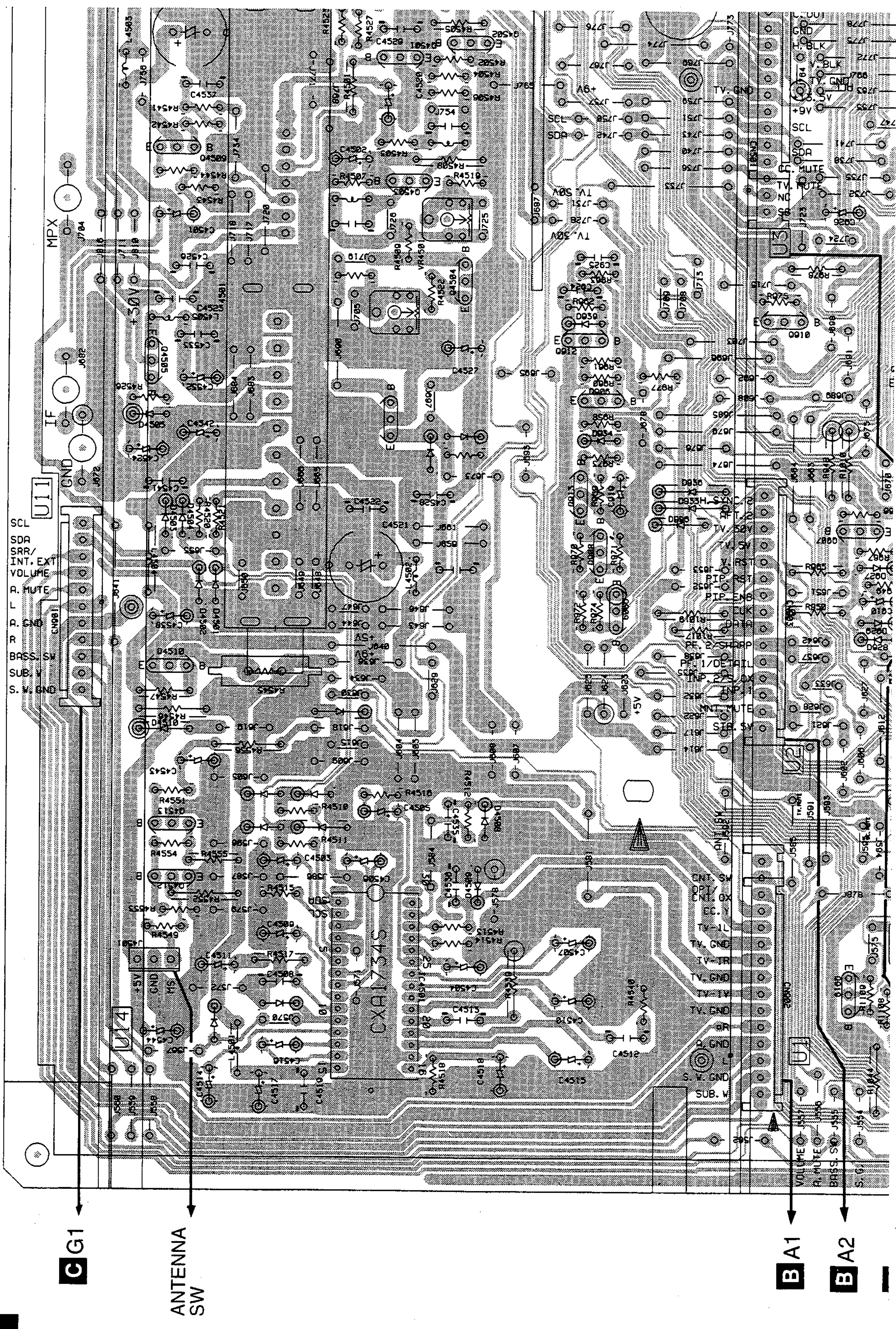
SIDE A

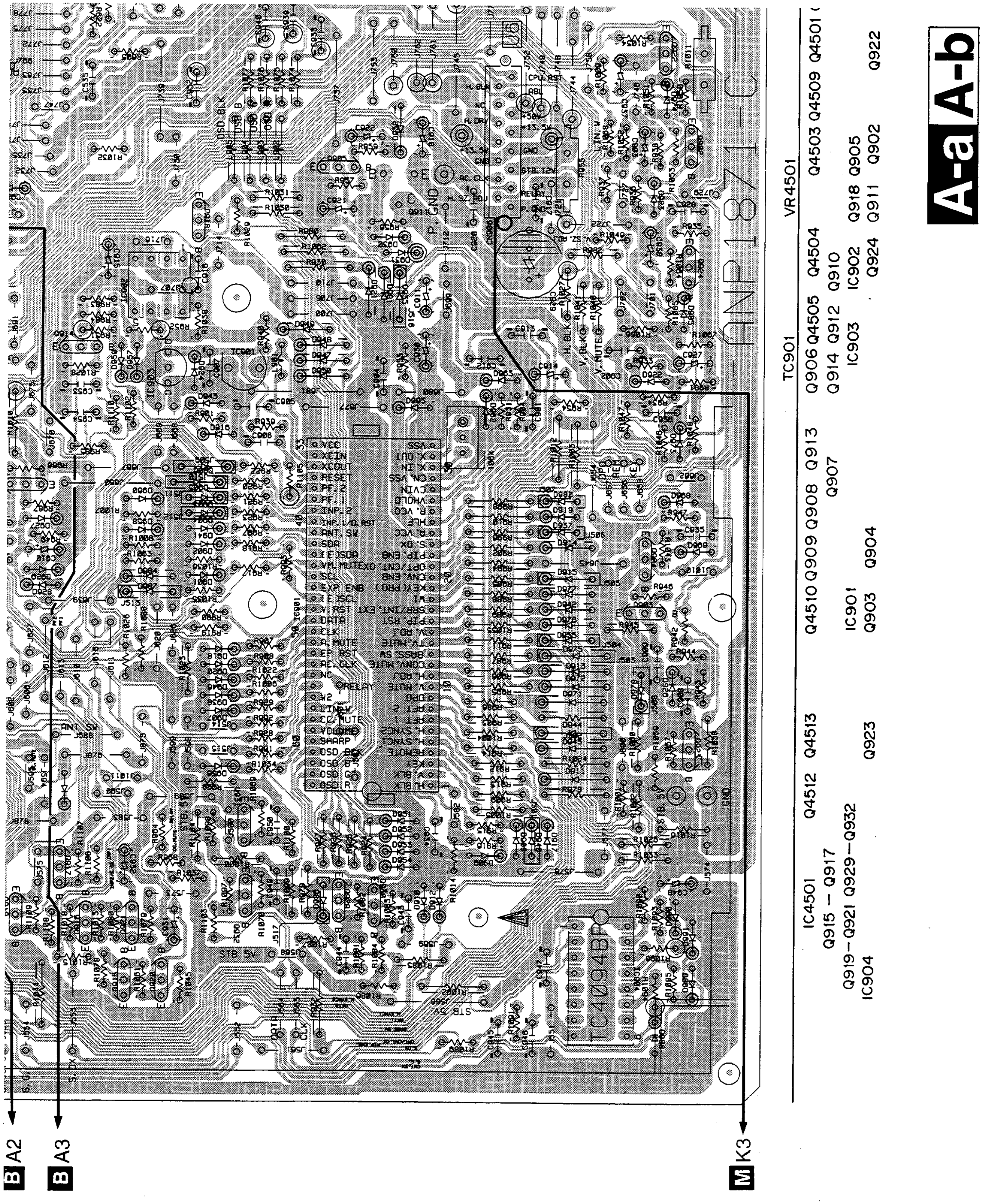

C G2
C G3
M K4
F M1
G N1
H P1
J B1
U10
U9
U7
U12
U13
U4
U5
STB.5V
VA.MUTE
HV.PARR
PIN.KEY
+13.5V
A.GND
P.D
+25/35V
+25V
C.GND
P.-25V
-25V
GND
AWZ6185
AWZ6198
PIONEER
CMK-P3X

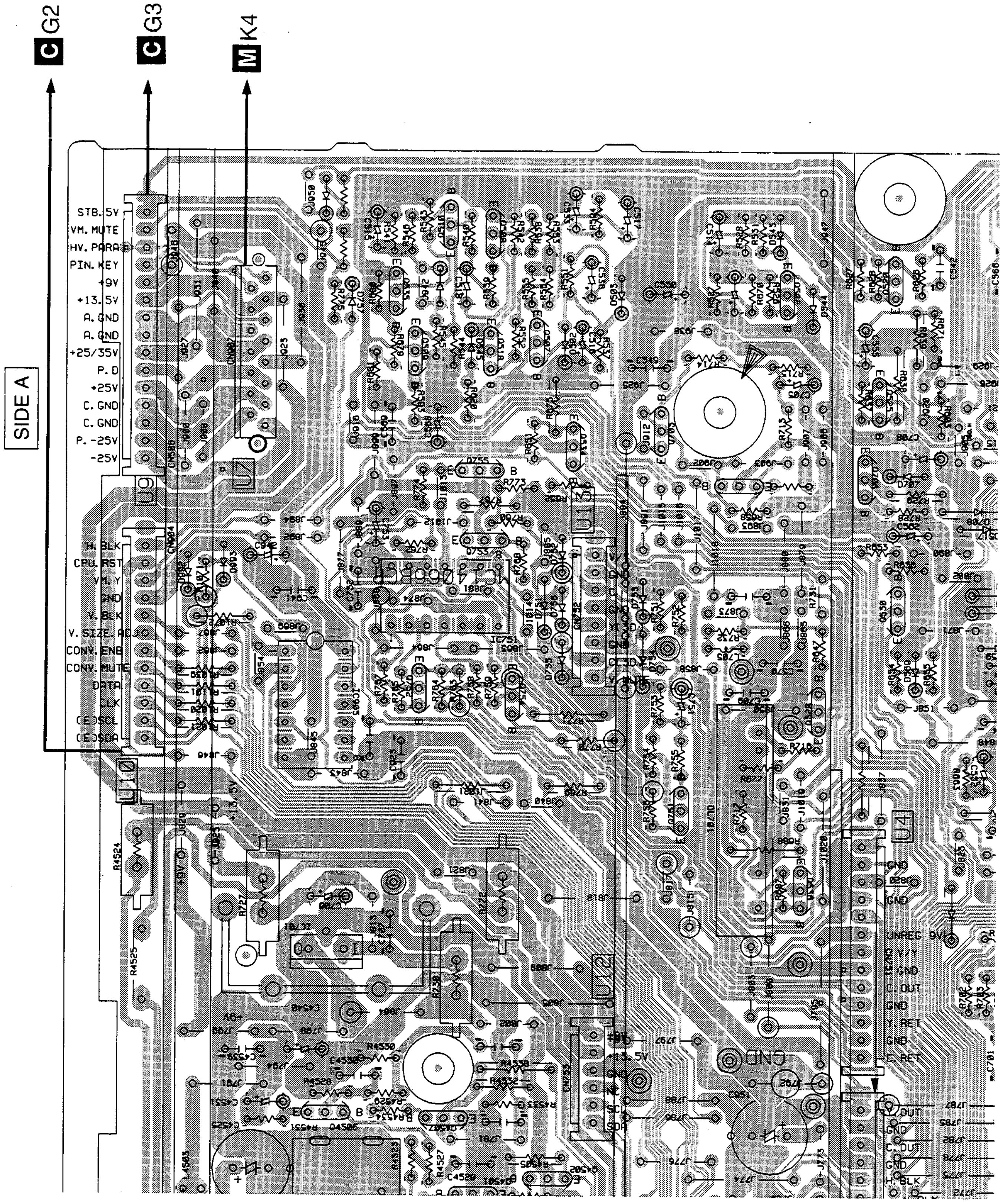

A-a
A-b
Large size PCB diagram
（大きなサイズのPCB図）
Guide page
（ガイドページ）
Detailed page
（詳細ページ）

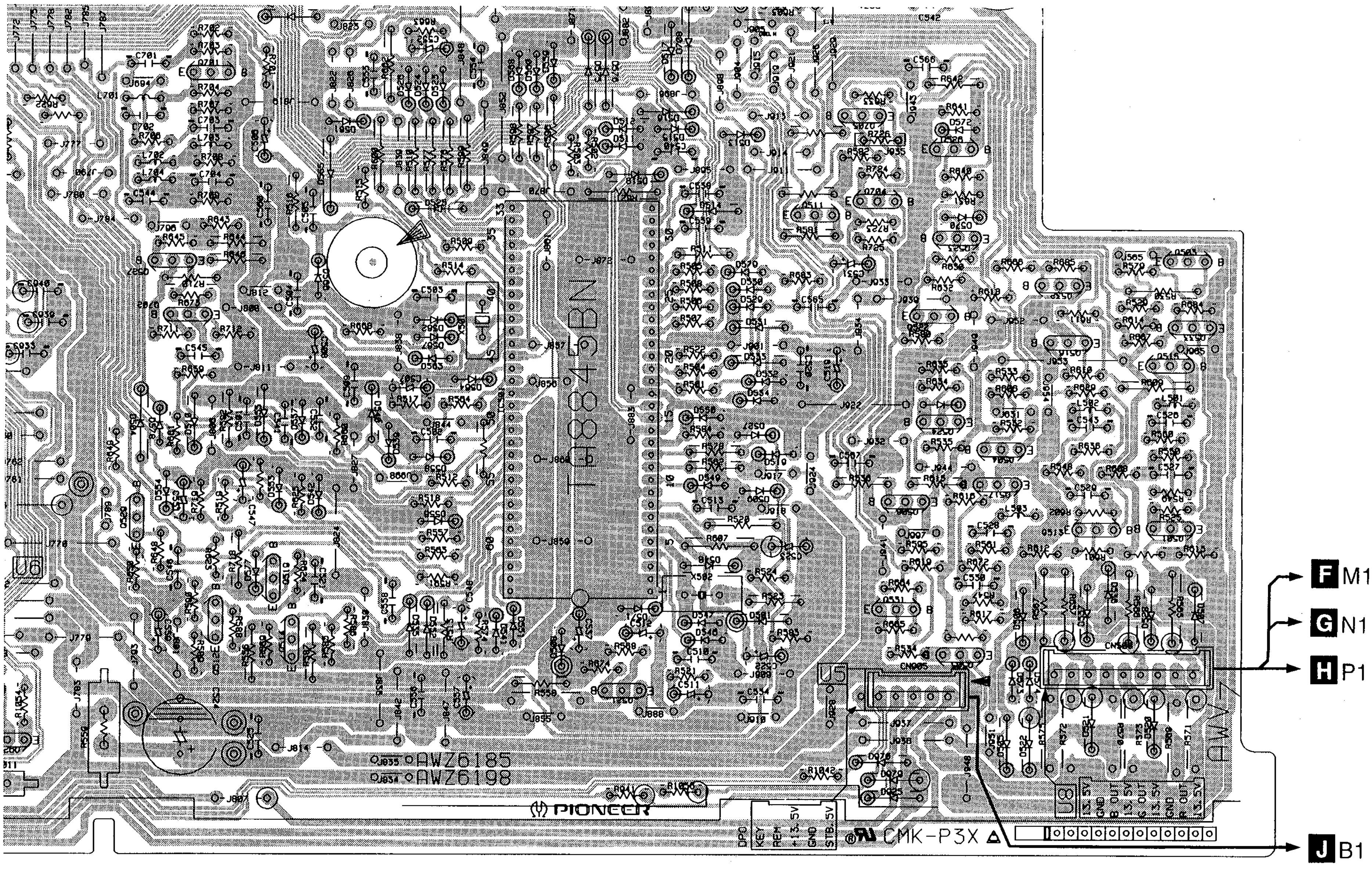
01 Q4502 Q4506 Q4507 IC701 IC905 Q752 IC751 Q753 Q755 Q507 – Q510
Q527 Q701 Q536 Q751 Q528 Q754 Q530 Q706 Q534 Q703 Q518 Q535 Q502 Q526 Q532 Q503
Q702 Q519 IC501 Q525 Q531 Q520 Q522–Q524 Q516 Q515 Q533
Q529 Q512 Q514 Q521 Q511 Q705 Q704 Q504–Q506 Q517 Q513 Q501

A TUNER • VIDEO ASSY


CXA1734S
MPX
IF
GND
+30V
U11
U14
U1
U2
U3
SCL
SDA
SRR/
INT. EXT
VOLUME
A. MUTE
L
A. GND
R
BASS. SW
SUB. V
S. W. GND
CN901
TV. GND
H. BLK
V. BLK
TV. GND
5.5V
+9V
SCL
SDA
CC. MUTE
TV. MUTE
NC
TV. 50V
TV. 30V
H. SYNC/2
AFT. 2
TV. 50V
TV. 5V
V. RST
PIP. RST
PIP. ENB
CLK
DATA
PF. 2/SHARP
PF. 1/DETAIL
INP. 2/S. DX
INP. 1
MNT. MUTE
STB. 5V
CNT. SW
OPT/
CNT. DX
CC. Y
TV-1L
TV. GND
TV-1R
TV. GND
TV-1V
TV. GND
R
A. GND
L
S. W. GND
SUB. W
VOLUME
A. MUTE
BASS. SW
5V
GND
MS
C G1
ANTENNA SW
B A1
B A2


TC901
VR4501
IC4501
Q4512 Q4513
Q4510 Q909 Q908 Q913
Q906 Q4505 Q4504
Q4503 Q4509 Q4501
Q915 – Q917
Q907
Q914 Q912 Q910
Q919–Q921 Q929–Q932
IC901
IC903 IC902
Q918 Q905
IC904
Q923
Q903 Q904
Q924
Q911 Q902
Q922
A-a A-b
B A2
B A3
M K3
TC4094BP
ANP1871-C


C G2
C G3
M K4
SIDE A
STB. 5V
VM. MUTE
HV. PARA
PIN. KEY
+9V
+13. 5V
A. GND
A. GND
+25/35V
P. D
+25V
C. GND
C. GND
P. -25V
-25V
CN508
U9
U7
U11
H. BLK
CPU. RST
VM. Y
GND
V. BLK
V. SIZE. ADJ
CONV. ENB
CONV. MUTE
DATA
CLK
CE)SCL
CE)SDA
U10
+13.5V
+9V
R4524
R4525
R727
R722
IC781
IC751
U12
U4
+13.5V
GND
SCL
SDA
GND
GND
UNREG 9V
V/Y
GND
C. OUT
GND
Y. RET
GND
C. RET
OUT
GND
C. OUT
GND
H. BLK
GND


F M1
G N1
H P1
J B1
CMK-P3X
AWZ6185
AWZ6198
PIONEER
TA8849BN
U5
U6
U8
CN905
DPO
KEY
REM
+13.5V
GND
STB.5V
13.5V
B OUT
GND
G OUT
R OUT

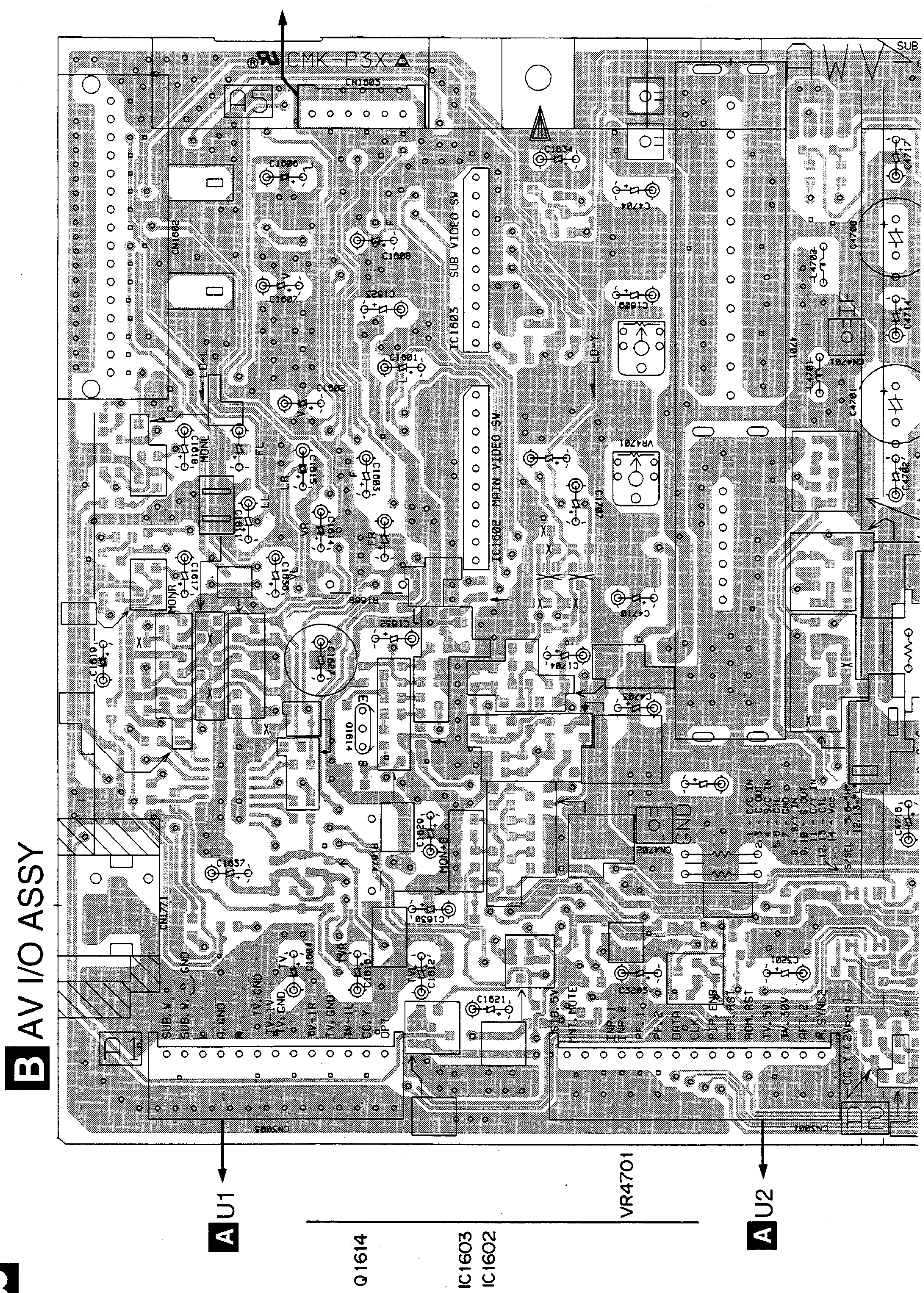
Q4501 Q4502 Q4506 Q4507 IC701 IC905 Q752 IC751 Q753 Q755 Q507 — Q510
Q527 Q701 Q536 Q751 Q528 Q754 Q530 Q706 Q534 Q703 Q518 Q535 Q502 Q526 Q532 Q503
Q702 Q519 IC501 Q525 Q531 Q520 Q522—Q524 Q516 Q515 Q533
922 Q529 Q512 Q514 Q521 Q511 Q705 Q704 Q504—Q506 Q517 Q513 Q501

A-a A-b

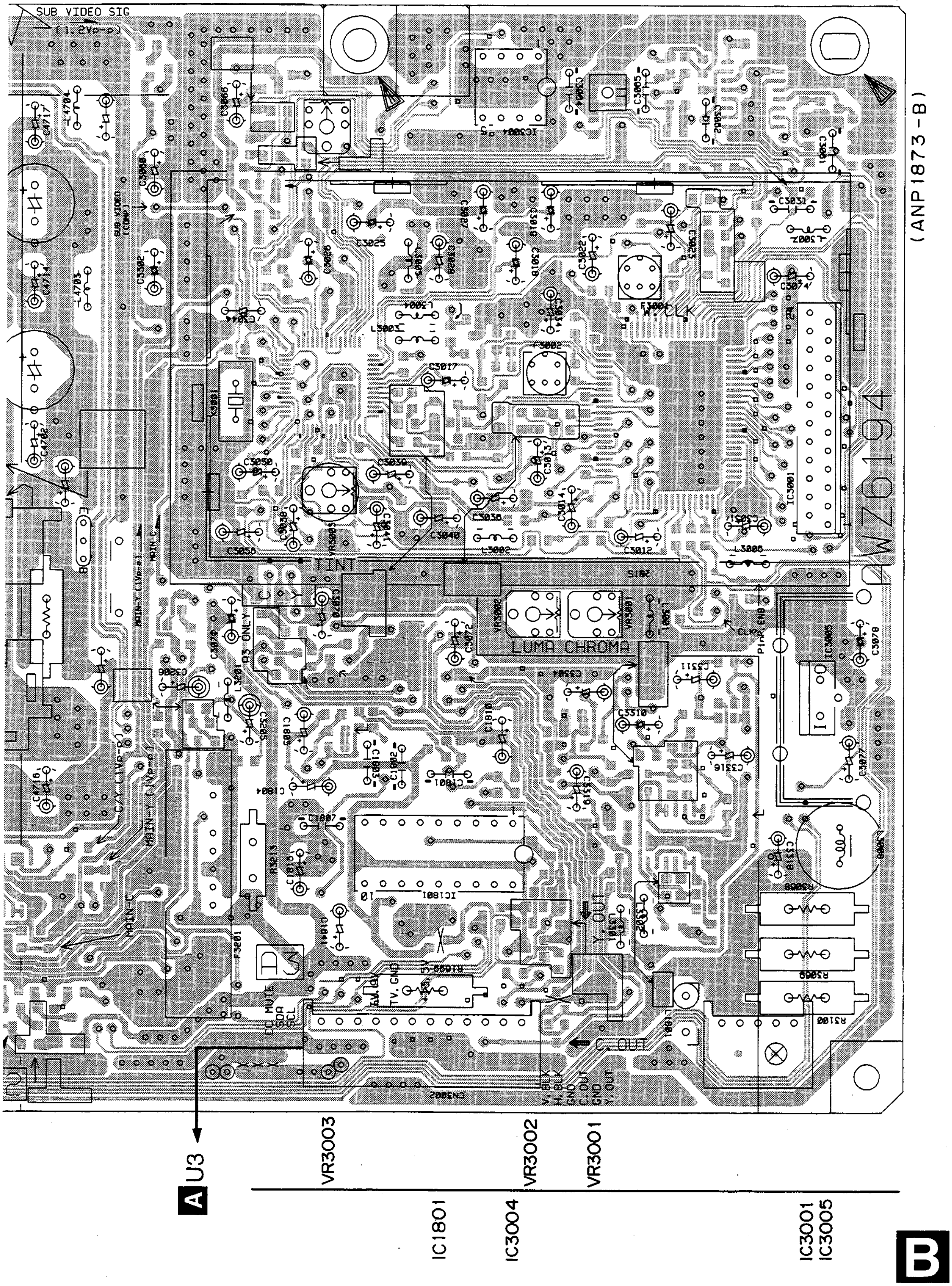
A-b

SD-P50A3-K, SD-P55A3-K

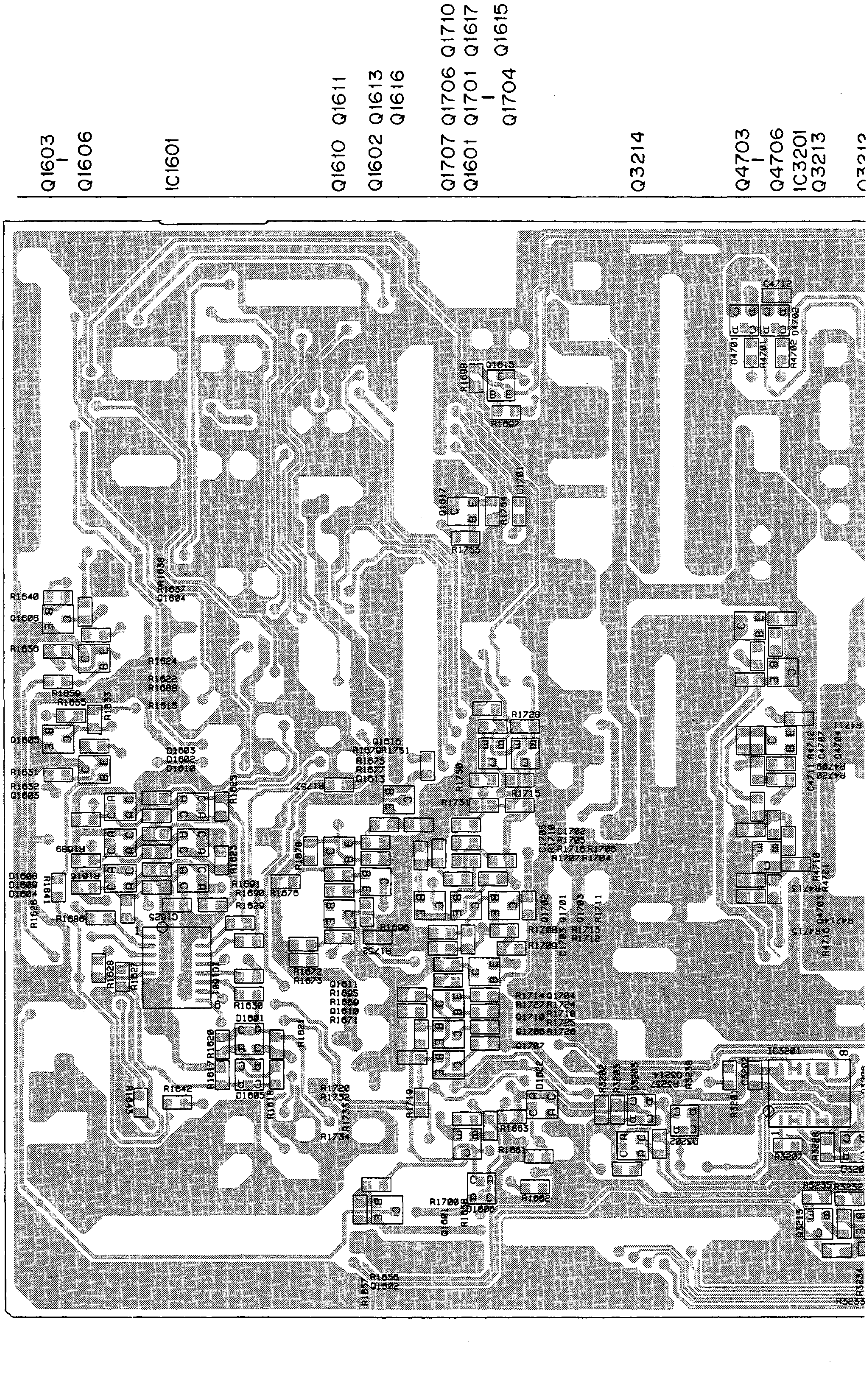
4.2 AV I/O ASSY


J B3
B AV I/O ASSY
CMK-P3X
CN1603
A5
CN1602
SUB VIDEO SW
IC1603
MAIN VIDEO SW
IC1602
VR4701
CN4701
CN4702
Q1614
CN1771
CN2802
CN2801
A2
SUB.W
SUB.W.GND
A.GND
TV.GND
TV-1V
TV.GND
TV-1R
TV.GND
TV-1L
CC.Y
OPT
ST.B.5V
HNT.MUTE
INP.1
INP.2
PT.1
PT.2
DATA
CLK
PIP.ENB
PIP.RST
ROM.RST
TV.5V
TV.30V
AFT.2
R.SYNC2
CC.Y (2VP-P)
GND
A U1
A U2
Q1614
IC1603
IC1602
VR4701

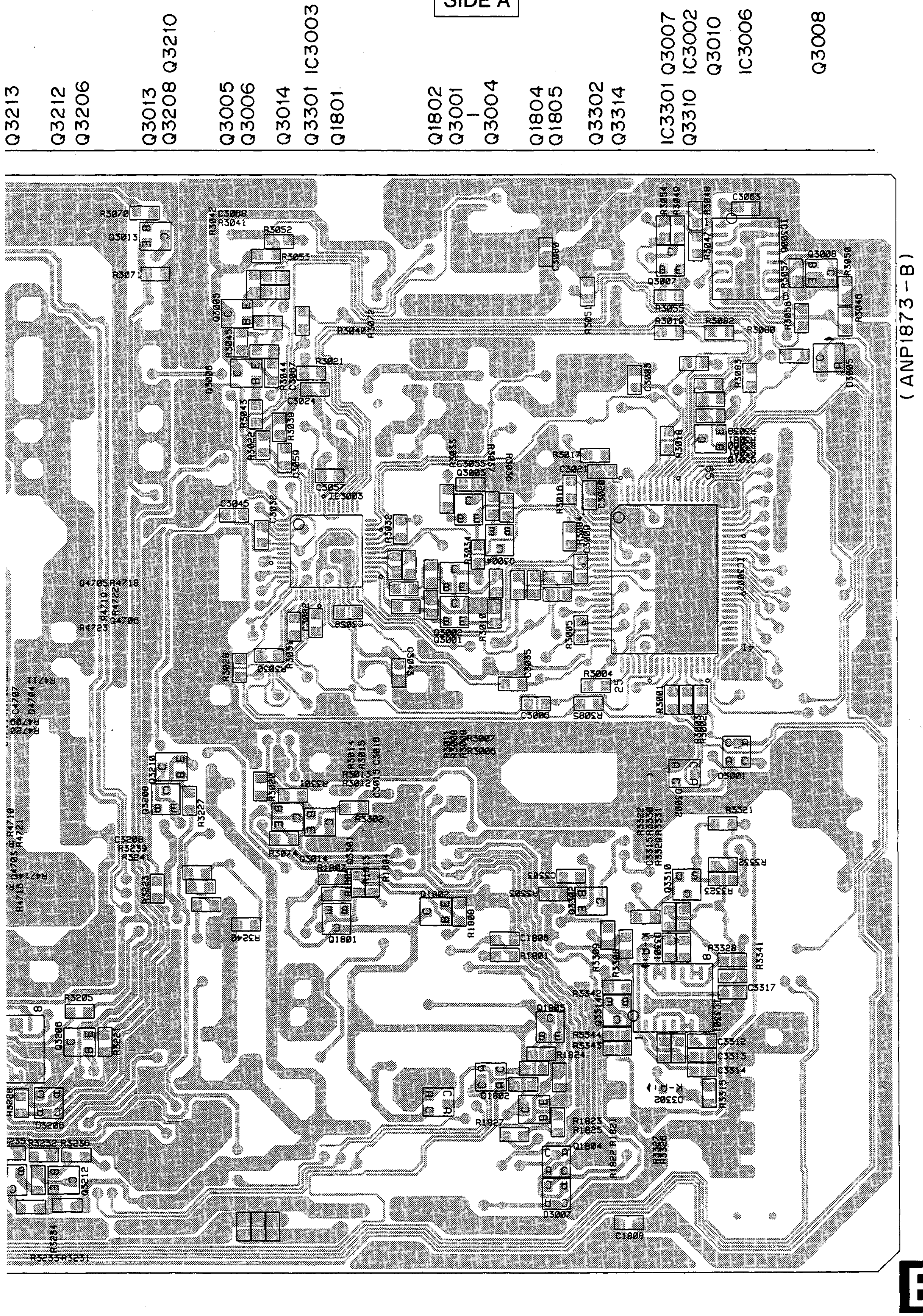
SIDE A


(ANP1873-B)
SUB VIDEO SIG
(1.2Vp-p)
SUB VIDEO (COMP)
MAIN-Y (1Vp-p)
MAIN-C
C/Y (1Vp-p)
TINT
A3 ONLY
LUMA CHROMA
M. CLK
CLK
PinP. ENB
Y. OUT
C. OUT
DC MUTE
SDA
SCL
TV. GND
V. BLK
H. BLK
GND
C. OUT
GND
Y. OUT
IC3001
IC3004
IC3005
IC1801
VR3001
VR3002
VR3003
X3001
F3001
F3002
CN3002
R3213
R3098
R3099
R3100
A U3
VR3003
VR3002
VR3001
IC1801
IC3004
IC3001
IC3005

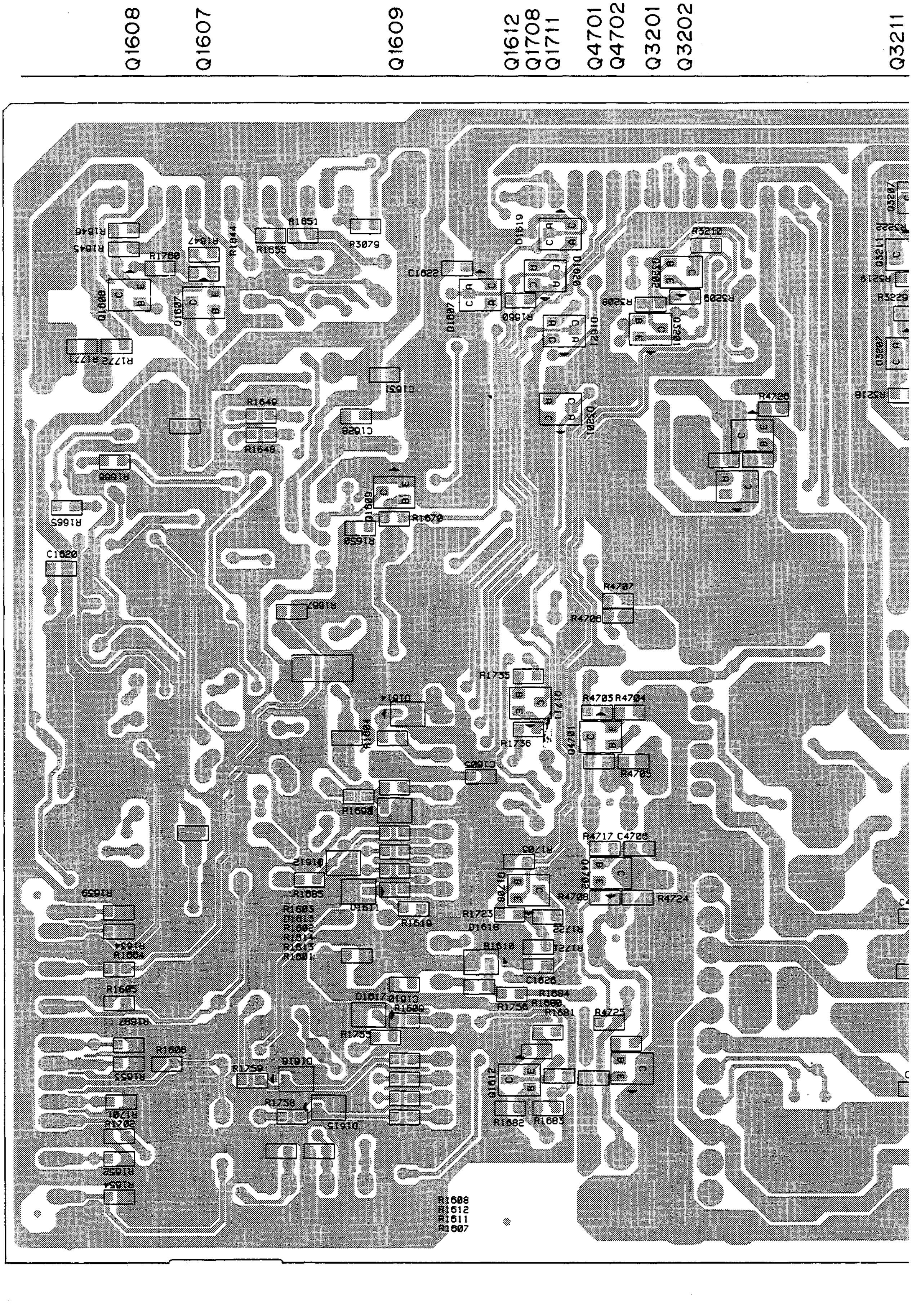
B AV I/O ASSY


Q1603
–
Q1606
IC1601
Q1610 Q1611
Q1602 Q1613
Q1616
Q1707 Q1706 Q1710
Q1601 Q1701 Q1617
–
Q1704 Q1615
Q3214
Q4703
–
Q4706
IC3201
Q3213
IC3201
Q1615
Q1617
C4712
R1640
Q1606
R1636
Q1605
Q1603
R1625
R1642
R1643
D1605
D1601
R1630
R1720
R1734
R1700
Q1601
D1606
R1656
Q1602
R1662
R1663
R1661
R1728
R1715
R1731
R3207
R3235
R3232
Q3213

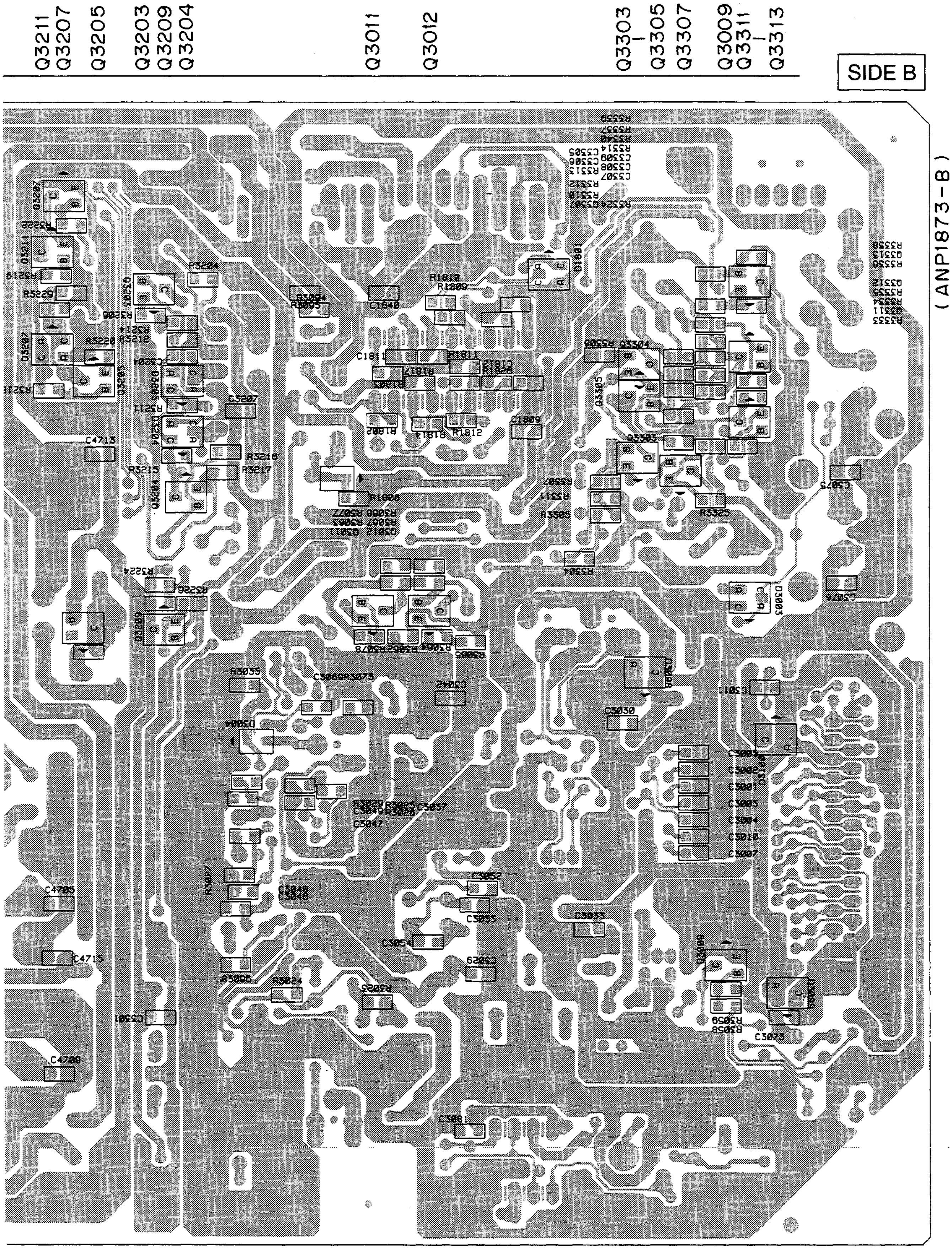
SIDE A


Q3213
Q3212
Q3206
Q3013
Q3208 Q3210
Q3005
Q3006
Q3014
Q3301 IC3003
Q1801
Q1802
Q3001
|
Q3004
Q1804
Q1805
Q3302
Q3314
IC3301 Q3007
Q3310 IC3002
Q3010
IC3006
Q3008
(ANP1873 - B)

B AV I/O ASSY

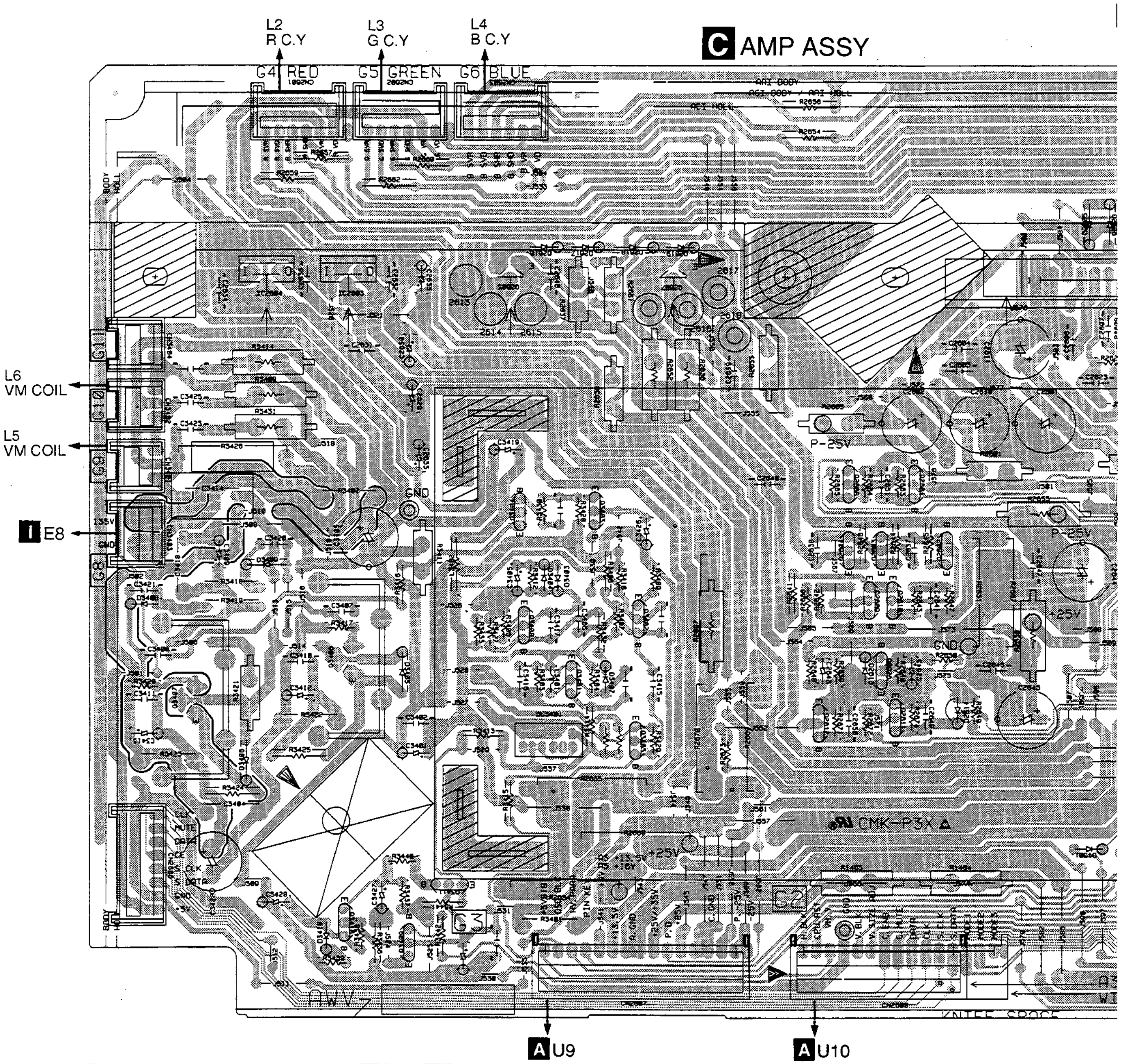

Q1608
Q1607
Q1609
Q1612
Q1708
Q1711
Q4701
Q4702
Q3201
Q3202
Q3211

SIDE B

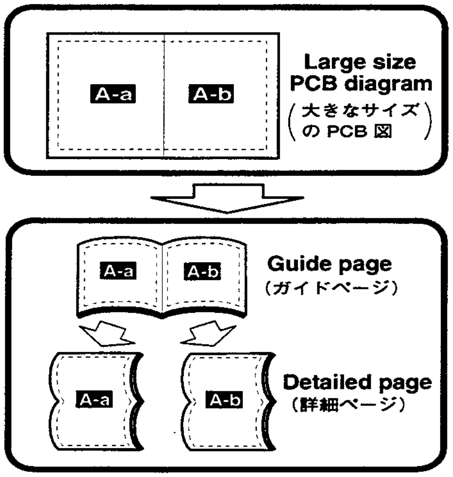

Q3211
Q3207
Q3205
Q3203
Q3209
Q3204
Q3011
Q3012
Q3303
|
Q3305
Q3307
Q3009
Q3311
|
Q3313
(ANP1873 - B)

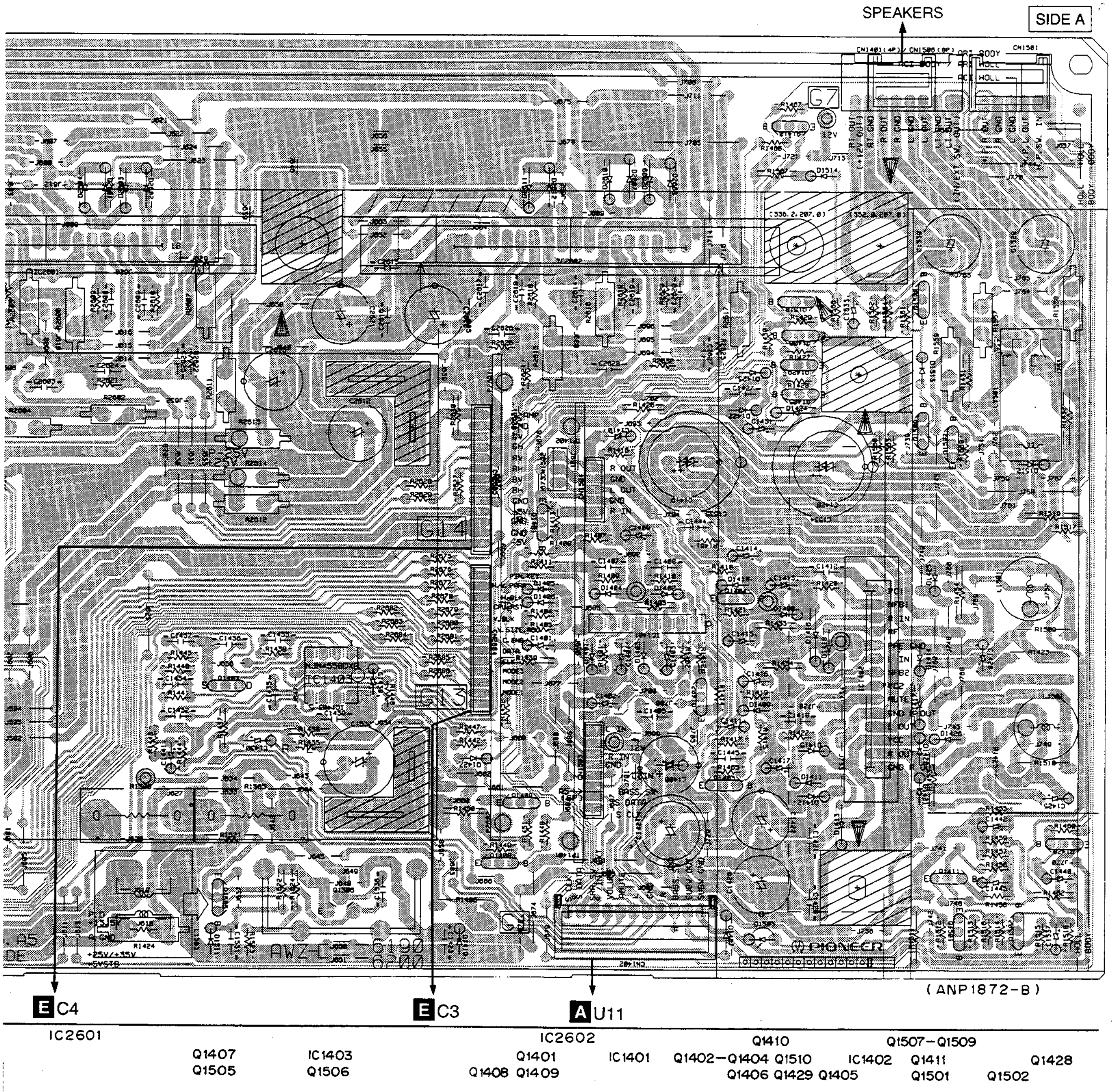
4.3 AMP ASSY
(GUIDE PAGE)

☐ : HIGH VOLTAGE GENERATION POINT
(EXCEPTIG THE CHARGED SECTION)


L2
R C.Y
L3
G C.Y
L4
B C.Y
C AMP ASSY
G4 RED
G5 GREEN
G6 BLUE
L6
VM COIL
L5
VM COIL
I E8
G11
G10
G9
G8
P-25V
+25V
GND
CMK-P3X
G2
G3
A U9
A U10

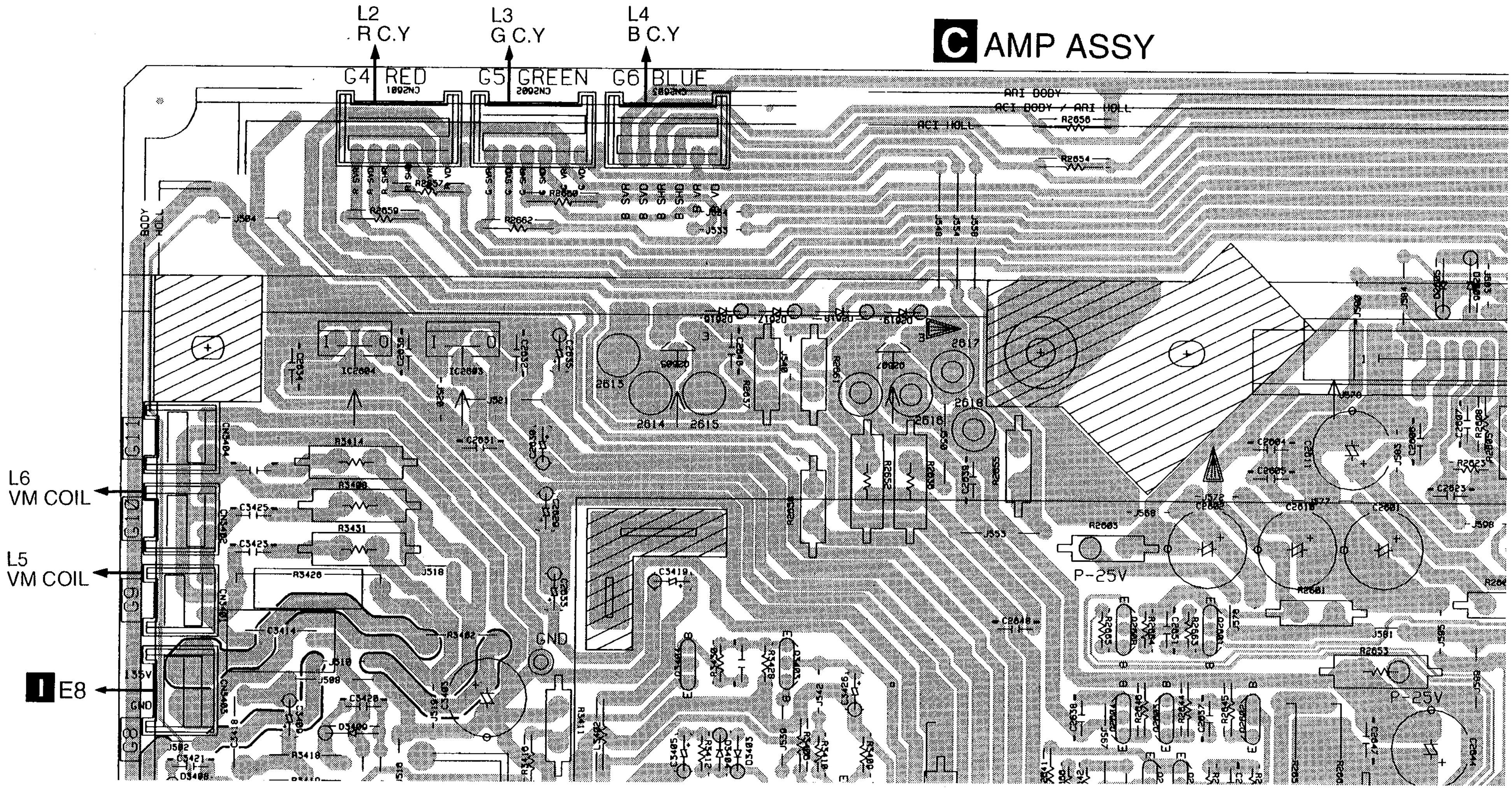
IC2604 IC2604 Q2605 Q2607 Q2606
Q3407 Q3406 Q3404 Q3403 Q3402 Q2601—Q2604
Q3410 Q3409 Q3411 Q3408 Q3401 Q3405 Q2608—Q2612

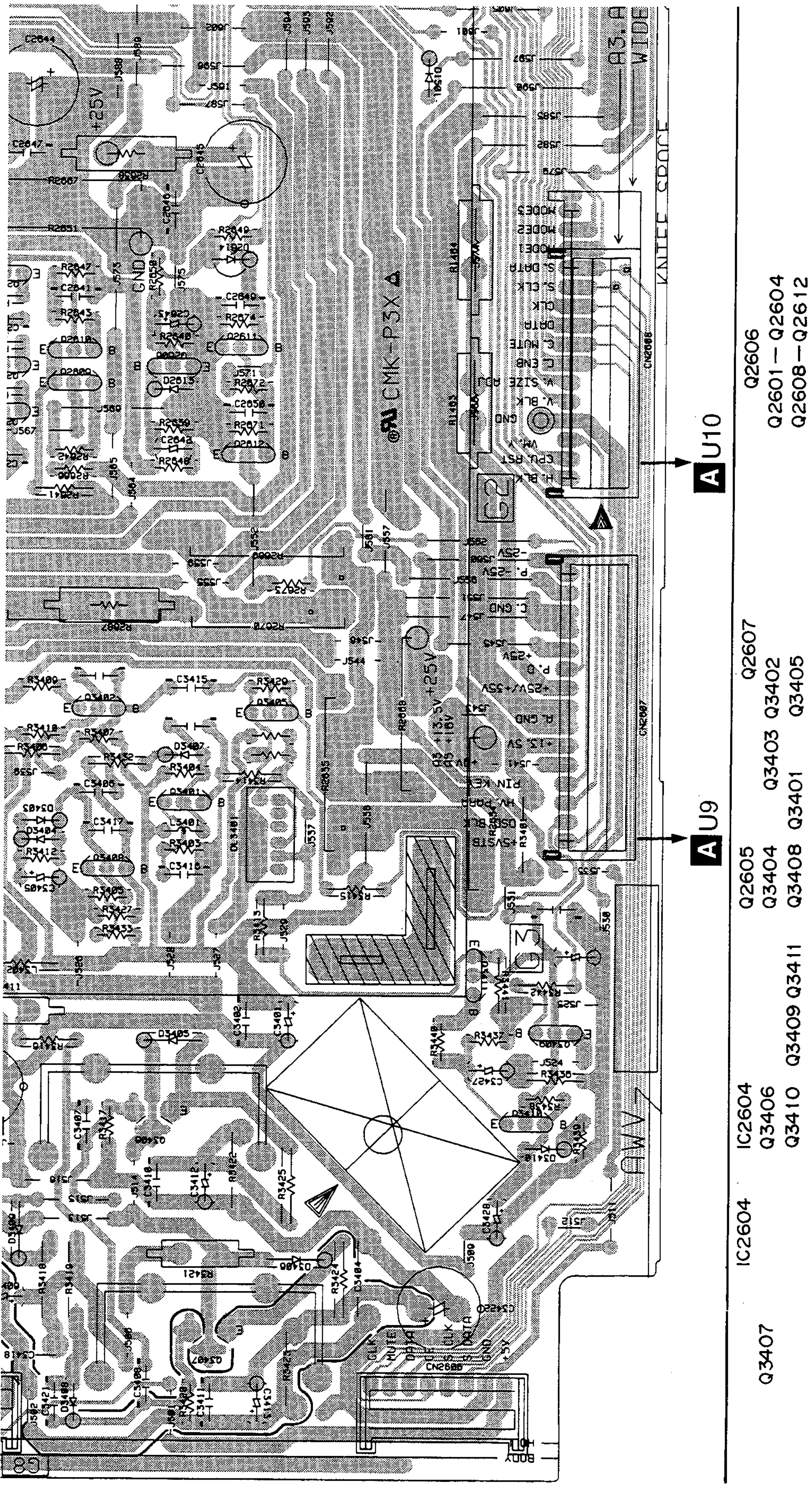

A-a
A-b
Large size PCB diagram
（大きなサイズのPCB図）
A-a
A-b
Guide page
（ガイドページ）
A-a
A-b
Detailed page
（詳細ページ）

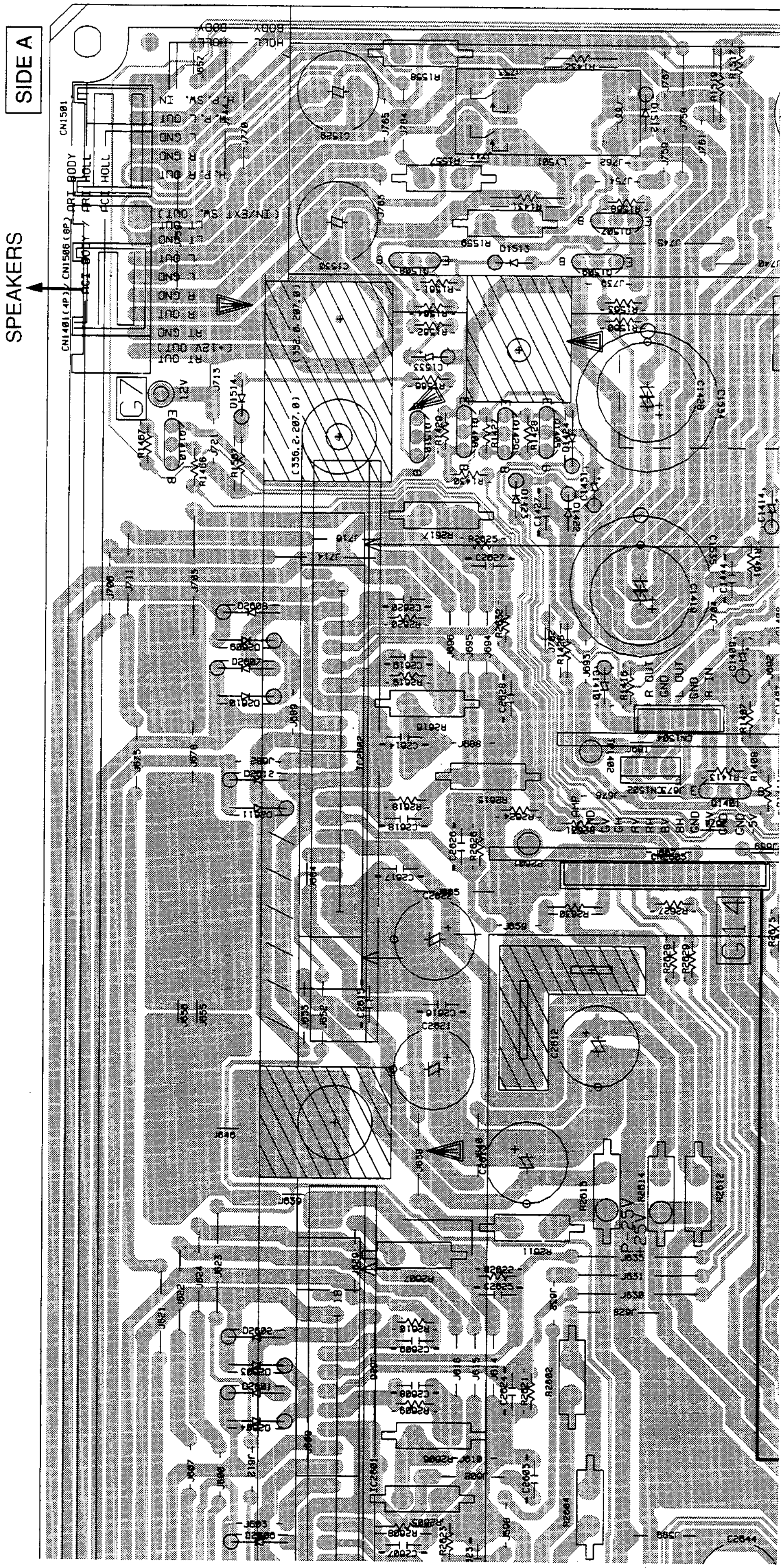

SPEAKERS
SIDE A
CN1401(4P)
CN1500(8P)
CN1501
G7
G14
G13
IC1403
NJM4558DX
PIONEER
AWZ-C
(ANP1872-B)
E C4
E C3
A U11
IC2601
Q1407
Q1505
IC1403
Q1506
IC2602
Q1401
Q1408 Q1409
IC1401
Q1410
Q1402–Q1404 Q1510
Q1406 Q1429 Q1405
IC1402
Q1507–Q1509
Q1411
Q1501
Q1502
Q1428

□ : HIGH VOLTAGE GENERATION POINT
(EXCEPTIG THE CHARGED SECTION)

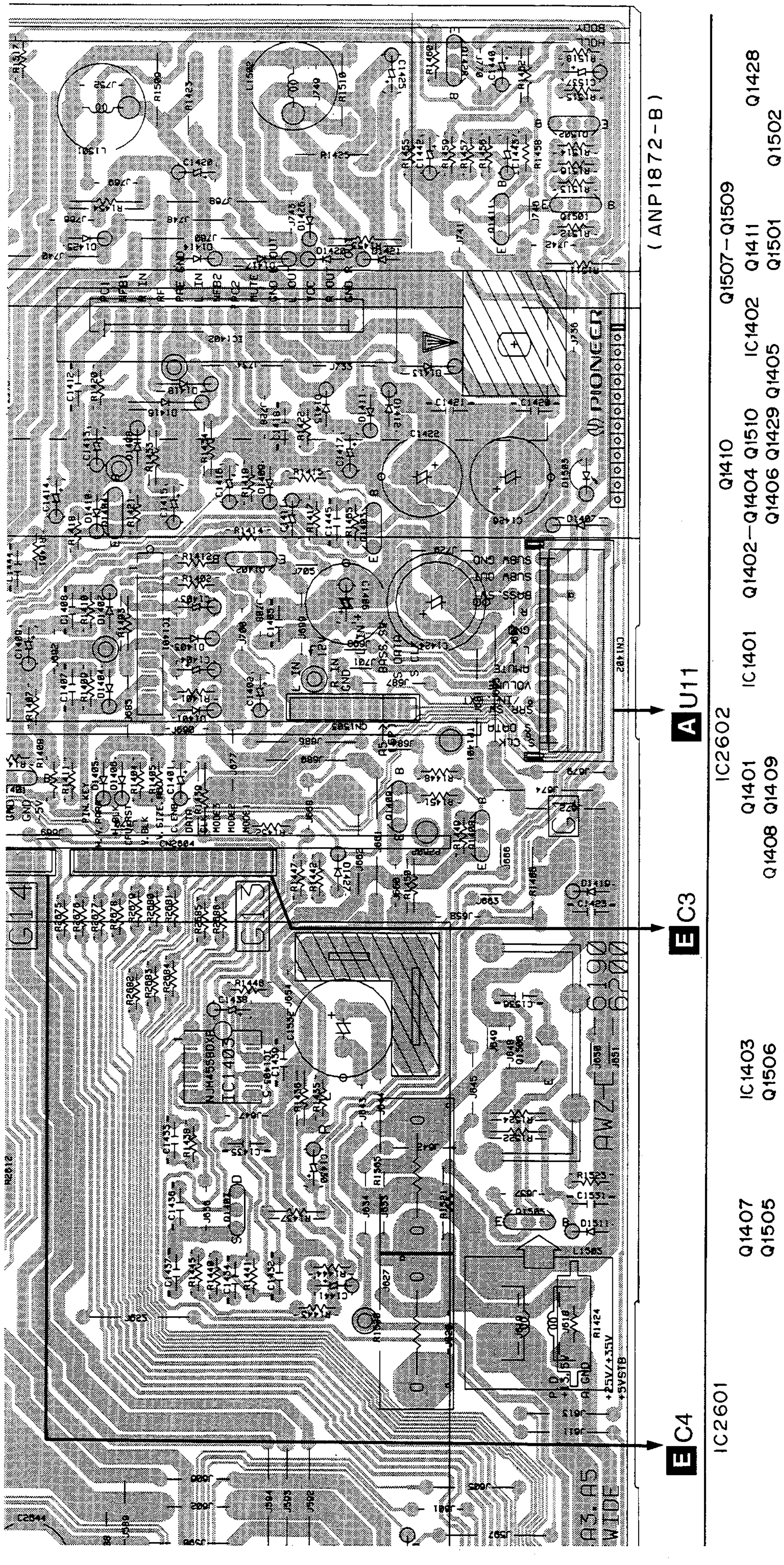
C AMP ASSY


L2
R C.Y
L3
G C.Y
L4
B C.Y
G4 RED
CN2001
G5 GREEN
CN2002
G6 BLUE
CN2003
ARI BODY
ACI BODY / ARI HOLL
ACI HOLL
R2656
R2654
R2657
R2659
R2660
R2662
J504
J533
J548
J554
J558
BODY
HOLL
IC2604
IC2603
J501
J520
C2634
C2636
C2632
C2635
C2631
C2630
C2629
C2633
2613
2614
2615
2617
2618
2616
R2637
C2640
J540
R2661
R2652
R2638
R2655
C2639
J553
J568
J570
J572
C2602
C2610
C2611
C2601
C2604
C2605
C2606
C2607
C2608
C2623
J584
J583
J582
J585
J588
J581
R2603
R2601
R2653
R2604
P-25V
P-25V
C2644
C2647
C2648
C2651
R2663
R2664
R2665
Q2601
Q2602
Q2603
Q2604
J576
J567
R2644
R2645
C2657
C2658
R3414
R3408
R3431
R3426
R3402
R3411
R3418
R3410
C3425
C3423
C3414
C3419
C3426
C3420
C3421
C3418
C3405
C3403
J518
J519
J510
J508
J502
J559
J542
D3402
D3403
D3404
D3408
Q3401
Q3403
R3412
R3428
R3409
R3430
GND
CN3404
CN3402
CN3401
CN3403
G11
G10
G9
G8
135V
GND
L6
VM COIL
L5
VM COIL
I E8

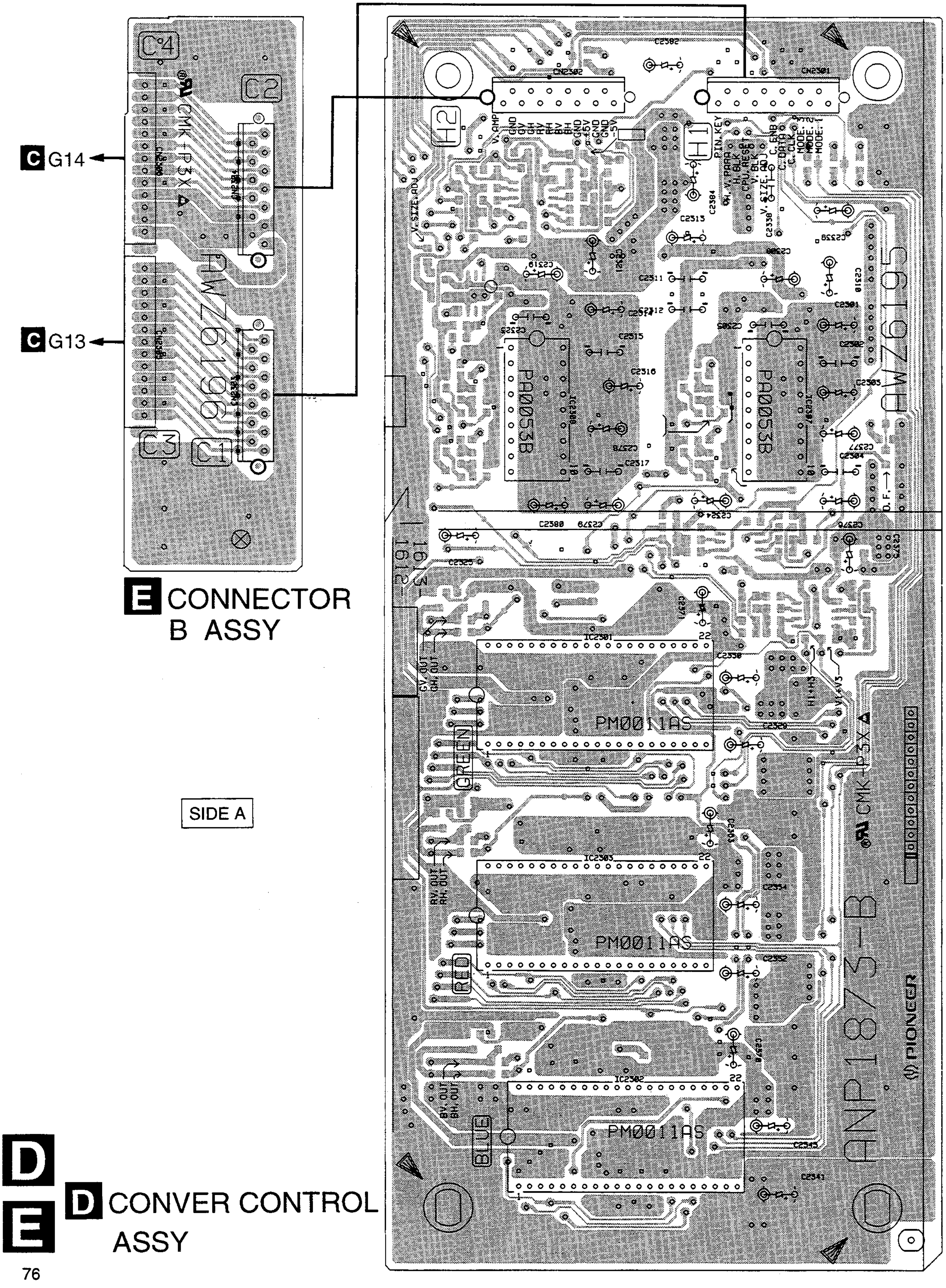

U10
U9
CMK-P3X
CN2606
CN2607
CN2605
+25V
KNIFE SPACE
Q2606
Q2601 — Q2604
Q2608 — Q2612
Q2607
Q3403 Q3402
Q3401 Q3405
Q2605
Q3404
Q3408
Q3411
Q3409
IC2604
Q3406
Q3410
IC2604
Q3407
BODY


SIDE A
SPEAKERS
CN1401(4P) / CN1506(8P)
CN1501
RT OUT
RT GND
R OUT
R GND
L GND
L OUT
LT GND
LT OUT
(IN/EXT SW. OUT)
H.P. R OUT
R GND
L GND
H.P. L OUT
P.SW. IN
HOLL
BODY
12V
G7
G14

□ : HIGH VOLTAGE GENERATION POINT
(EXCEPTIG THE CHARGED SECTION)

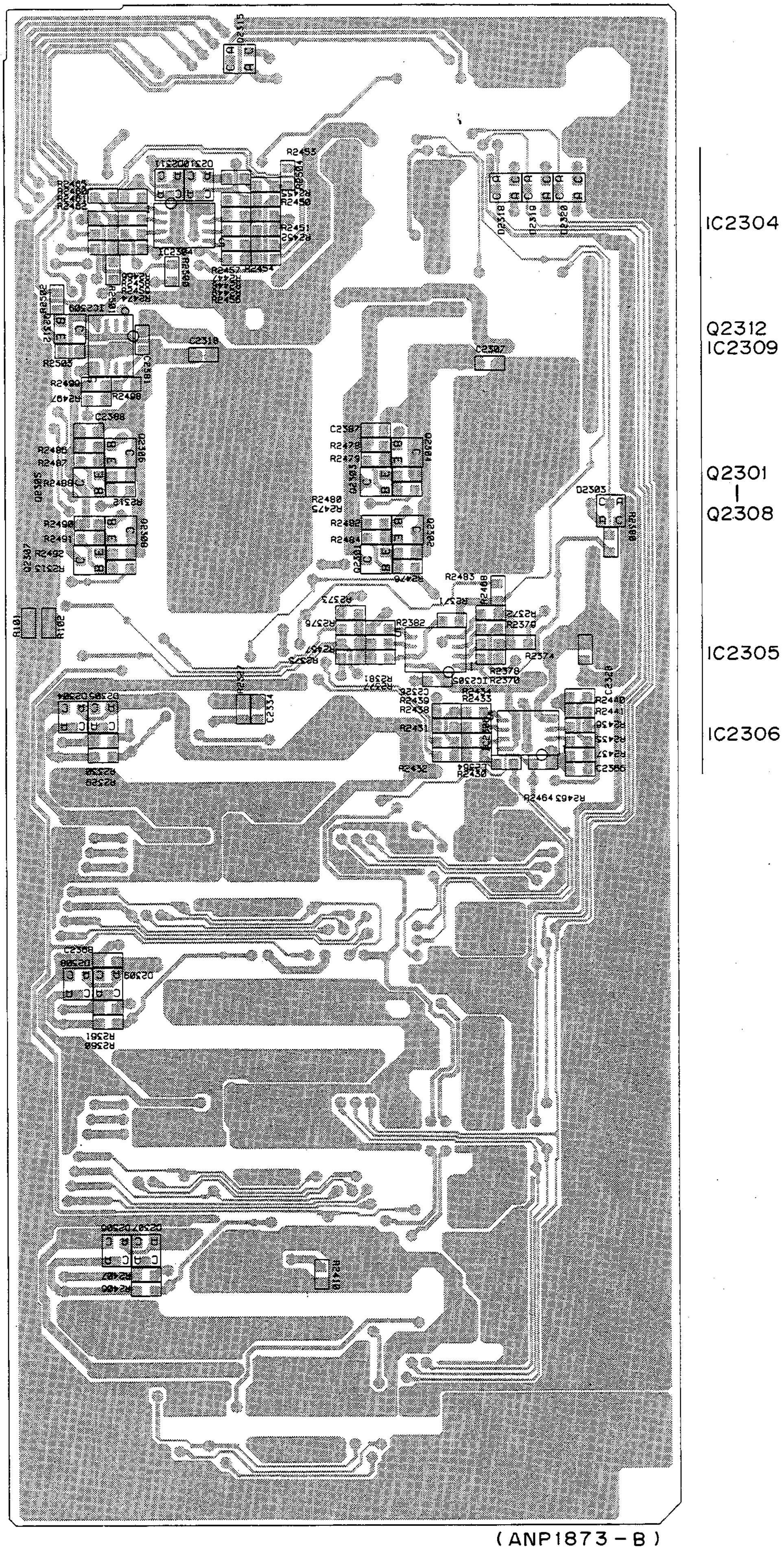

(ANP1872-B)
A U11
E C3
E C4
IC2601
Q1407
Q1505
IC1403
Q1506
Q1408
Q1401
Q1409
IC2602
IC1401
Q1402–Q1404
Q1406
Q1410
Q1510
Q1429
Q1405
IC1402
Q1507–Q1509
Q1411
Q1501
Q1428
Q1502
PIONEER
AWZ-C A3, A5 WIDE

4.4 CONVER CONTROL AND CONNECTOR B ASSEMBLIES


C G14
C G13
E CONNECTOR B ASSY
SIDE A
D CONVER CONTROL ASSY
D
E
C4
C2
C3
C1
CMK-P3X
AWZ6196
CN2302
CN2301
C2382
H2
H1
V.AMP
GND
+5V
P.IN.KEY
V.PARA
H.BLK
CPU.RESET
V.BLK
V.SIZE.ADJ
C.ENB
C.DATA
C.CLK
MODE
PA0053B
PM0011AS
IC2301
IC2303
IC2302
GV.OUT
GH.OUT
RV.OUT
RH.OUT
BV.OUT
BH.OUT
GREEN
RED
BLUE
H1+H3
V1+V3
D.F.
1613
ANP1873-B
AWZ6195
PIONEER

D CONVER CONTROL ASSY

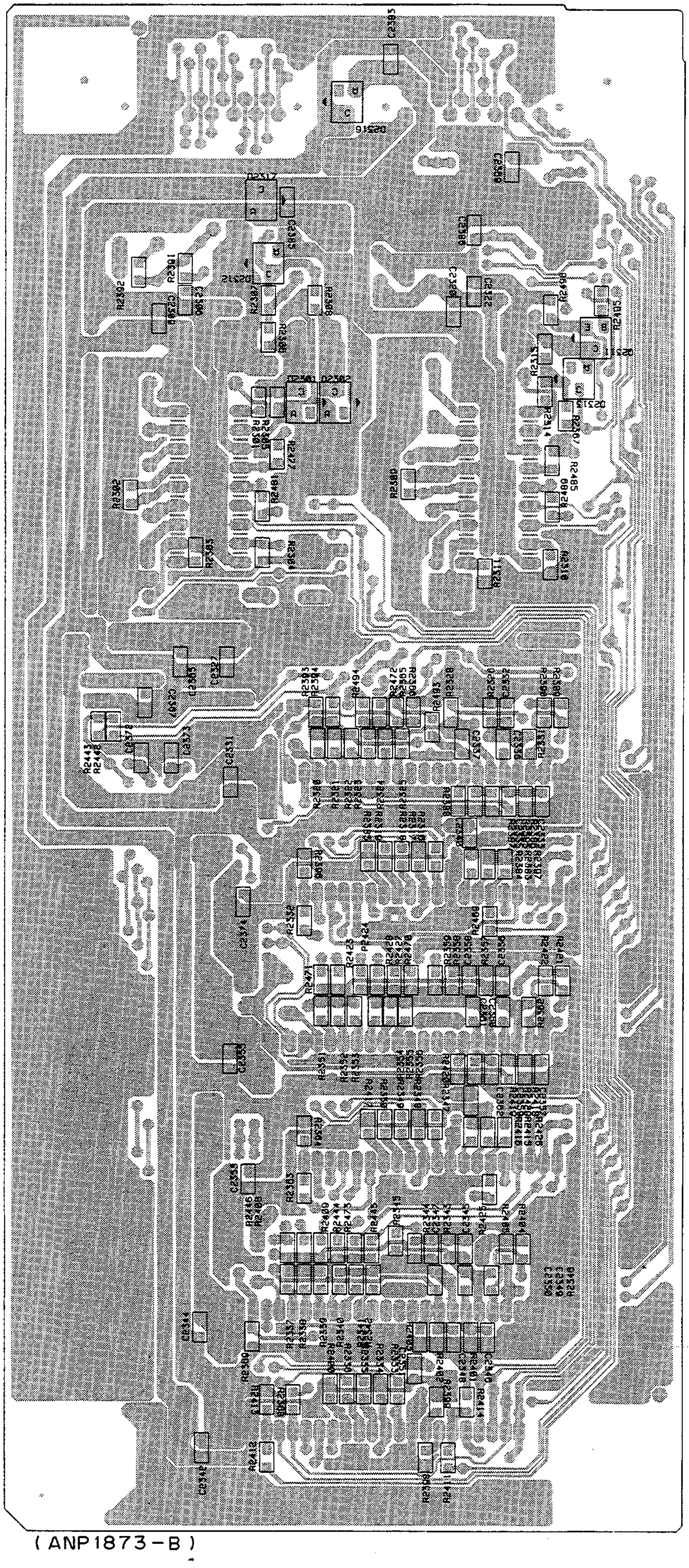
SIDE A


IC2304
Q2312
IC2309
Q2301
Q2308
IC2305
IC2306
D2315
D2311
D2310
IC2304
R2453
R2450
R2451
R2452
R2454
R2500
R2502
Q2312
IC2309
R2503
C2310
C2381
R2498
R2496
R2497
C2308
Q2306
R2486
R2487
R2488
D2305
Q2308
R2490
R2491
R2492
Q2307
R2515
R101
R102
C2307
C2387
Q2304
R2478
R2479
Q2303
R2480
R2475
Q2302
R2482
R2484
Q2301
R2476
D2303
R2508
R2483
R2468
R2373
R2376
R2382
R2371
R2372
R2379
R2374
R2378
R2370
IC2305
R2381
C2320
R2440
R2441
R2456
R2455
R2457
C2386
IC2306
R2433
R2438
R2431
R2432
R2430
R2464
R2463
D2304
D2305
R2567
C2334
R2529
R2530
C2308
D2508
D2509
R2561
R2560
D2507
D2506
R2407
R2406
R2410

(ANP1873 – B)

D CONVER CONTROL ASSY

SIDE B

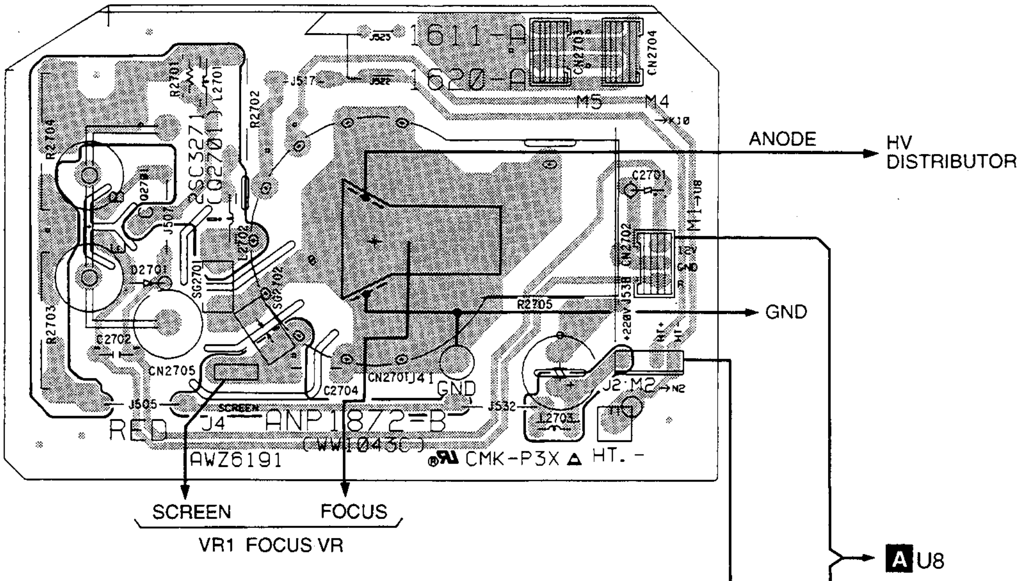

C2393
D2316
D2317
D2315
R2391
R2392
R2387
R2388
D2301
D2302
R2477
R2481
R2382
R2380
R2311
R2490
R2495
R2315
D2314
R2314
R2489
R2494
C2374
C2355
C2353
C2344
R2351
R2352
R2353
R2383
R2337
R2338
R2339
R2340
R2412
R2443
R2446

(ANP1873－B)

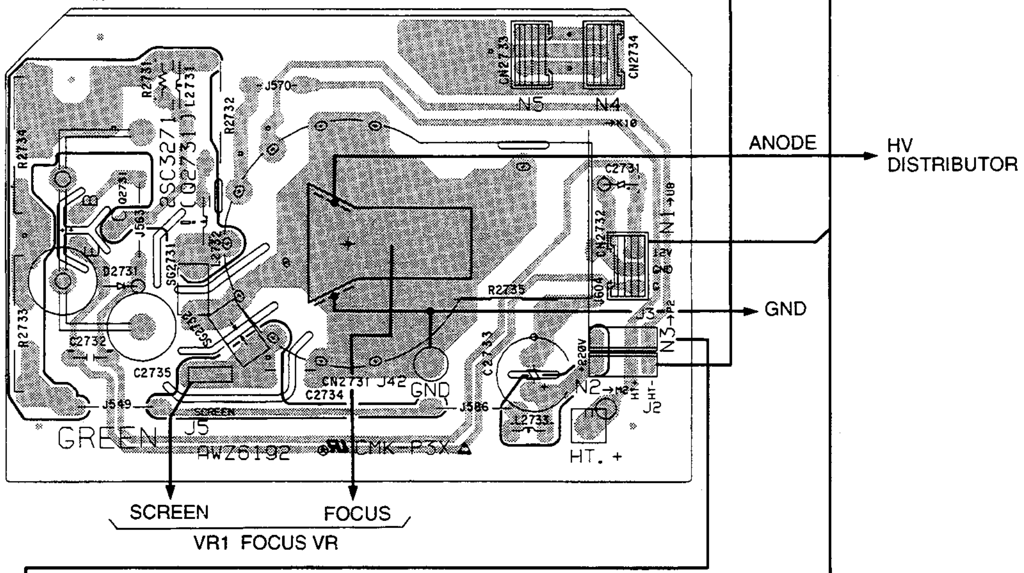
4.5 R,G AND B CRT AMP ASSEMBLIES

☐ : HIGH VOLTAGE GENERATION POINT
(EXCEPTIG THE CHARGED SECTION)

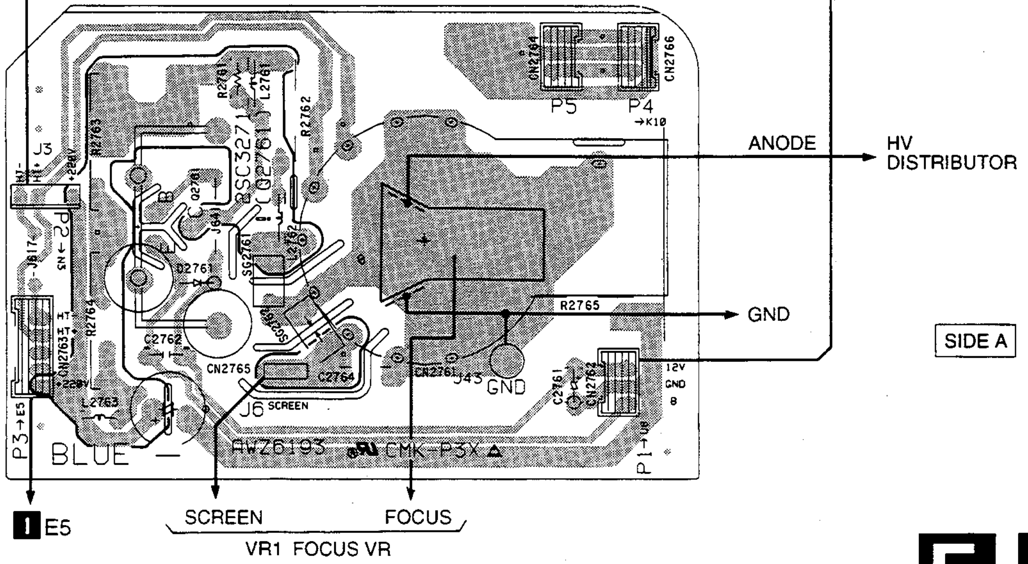
F R CRT AMP ASSY


1611-A
1620-A
CN2703
CN2704
M5
M4
→K10
ANODE
HV DISTRIBUTOR
R2701
L2701
2SC3271
(Q2701)
R2702
R2704
Q2701
J507
D2701
SG2701
L2702
SG2702
C2701
CN2702
M1→U8
12V
GND
R
R2705
+220V
J538
GND
R2703
C2702
CN2705
C2704
CN2701
J41
GND
J2
M2→N2
J505
SCREEN
J4
J532
L2703
RED
ANP1872-B
(WW10436)
AWZ6191
CMK-P3X
HT. -
SCREEN
FOCUS
VR1 FOCUS VR
A U8

G G CRT AMP ASSY


CN2733
CN2734
N5
N4
→K10
J570
R2731
L2731
2SC3271
(Q2731)
R2732
R2734
ANODE
HV DISTRIBUTOR
C2731
Q2731
J565
SG2731
L2732
D2731
CN2732
N1→U8
12V
GND
R2735
J604
GND
J3
N3→P2
R2733
C2732
C2735
CN2731
J42
C2734
GND
C2733
+220V
N2→M2
J2
J549
SCREEN
J586
L2733
GREEN
J5
AWZ6192
CMK-P3X
HT. +
SCREEN
FOCUS
VR1 FOCUS VR

H B CRT AMP ASSY

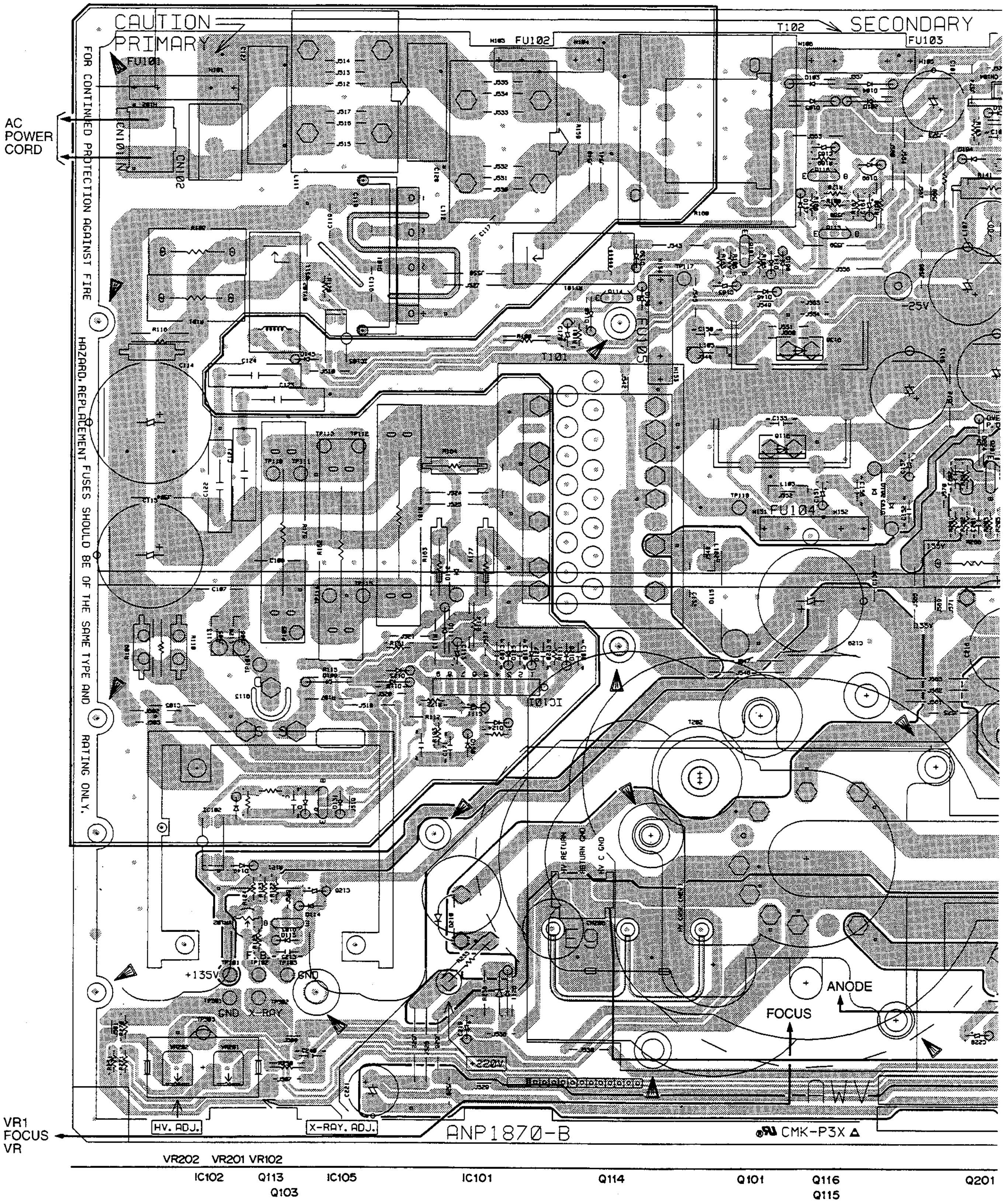

CN2764
CN2766
P5
P4
→K10
R2761
L2761
2SC3271
(Q2761)
R2762
R2763
J3
+220V
ANODE
HV DISTRIBUTOR
Q2761
J641
P2→N3
J617
D2761
SG2761
L2762
R2765
GND
R2764
CN2763
C2762
CN2765
C2764
CN2761
J43
GND
C2761
CN2762
12V
GND
8
L2763
J6
SCREEN
P3→E5
BLUE
AWZ6193
CMK-P3X
P1→U8
SCREEN
FOCUS
VR1 FOCUS VR
I E5
SIDE A

I-a

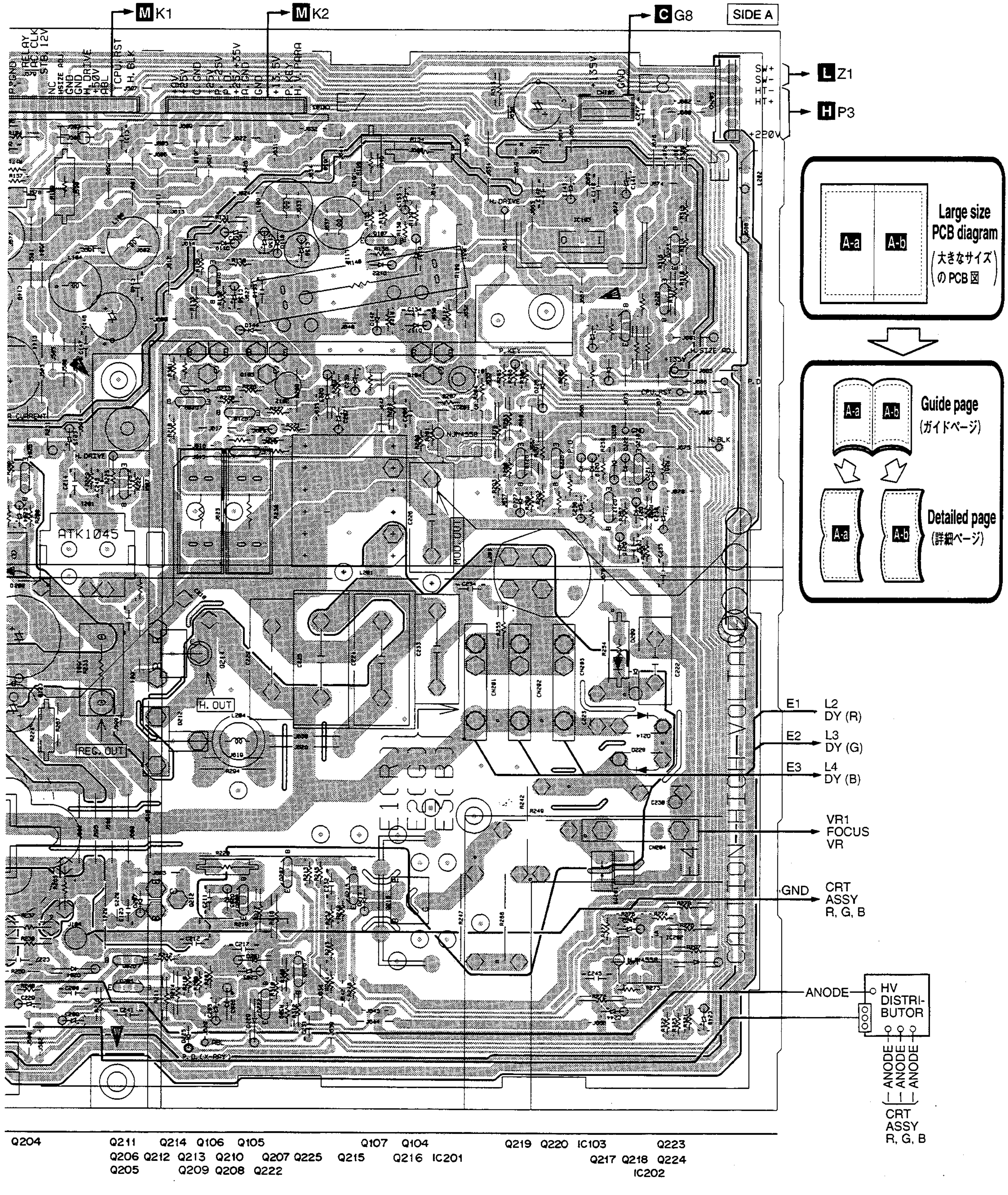
4.6 POWER SUPPLY SERVICE ASSY

(GUIDE PAGE)

I POWER SUPPLY SERVICE ASSY ▭ : CHARGED SECTION


CAUTION
PRIMARY
SECONDARY
T102
FU101
FU102
FU103
FU104
FU105
T101
T202
IC101
FOR CONTINUED PROTECTION AGAINST FIRE HAZARD, REPLACEMENT FUSES SHOULD BE OF THE SAME TYPE AND RATING ONLY.
AC POWER CORD
CN101
CN102
-25V
135V
+135V
GND
X-RAY
HV RETURN
RETURN GND
HV C GND
+220V
ANODE
FOCUS
HV. ADJ.
X-RAY. ADJ.
ANP1870-B
CMK-P3X ▲
VR1 FOCUS VR
VR202
VR201
VR102
IC102
Q113
Q103
IC105
IC101
Q114
Q101
Q116
Q115
Q201

☐ : HIGH VOLTAGE GENERATION POINT
(EXCEPTIG THE CHARGED SECTION)

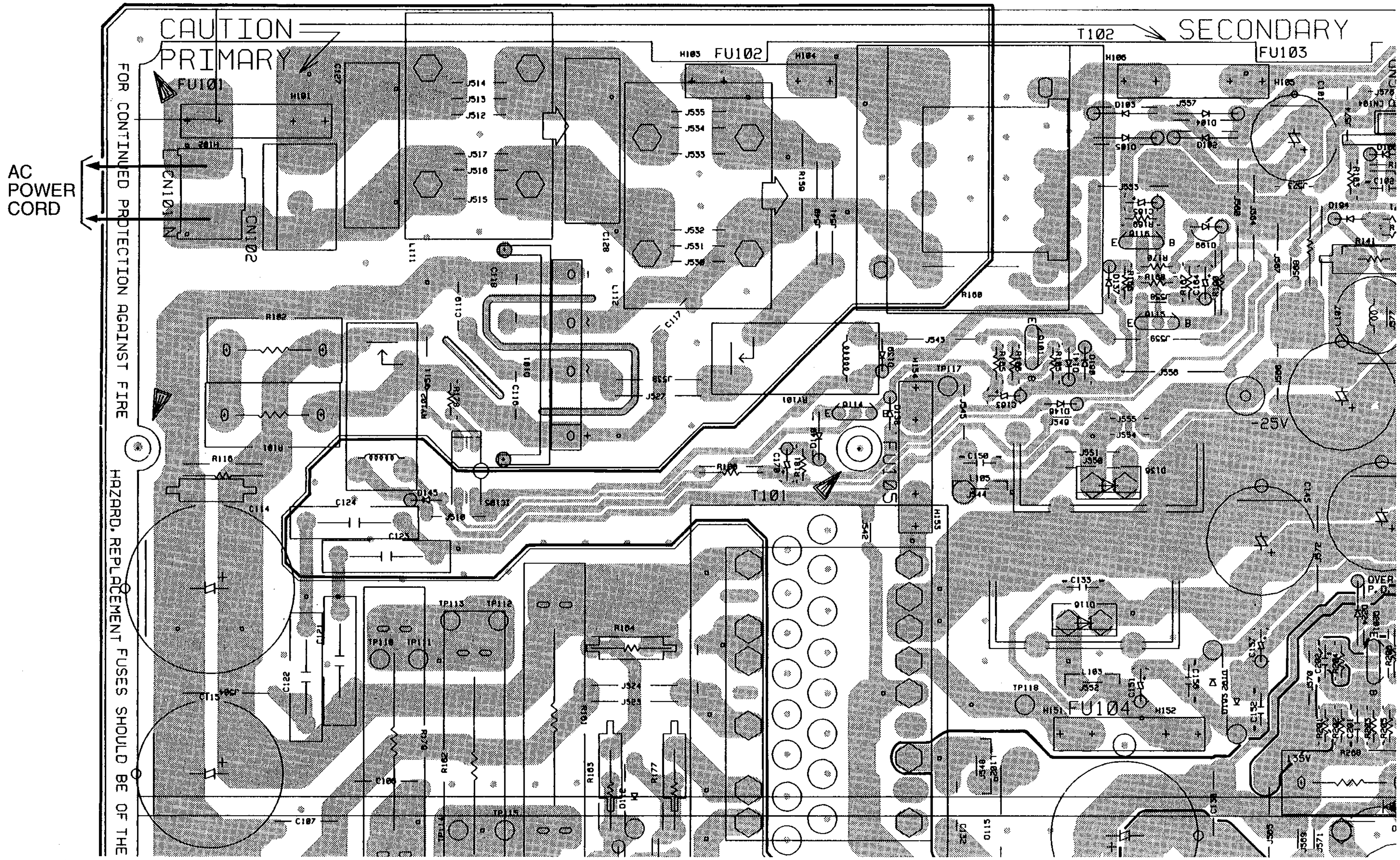

M K1
M K2
C G8
SIDE A
SW+
SW-
HT-
HT+
+220V
L Z1
H P3
ATK1045
H. OUT
REG. OUT
MOD. OUT
H. DRIVE
P. KEY
H. SIZE ADJ
CPU RST
H. BLK
E1
L2
DY (R)
E2
L3
DY (G)
E3
L4
DY (B)
VR1
FOCUS
VR
GND
CRT
ASSY
R, G, B
ANODE
HV
DISTRI-
BUTOR
ANODE
ANODE
ANODE
CRT
ASSY
R, G, B
A-a
A-b
Large size
PCB diagram
（大きなサイズのPCB図）
A-a
A-b
Guide page
（ガイドページ）
A-a
A-b
Detailed page
（詳細ページ）

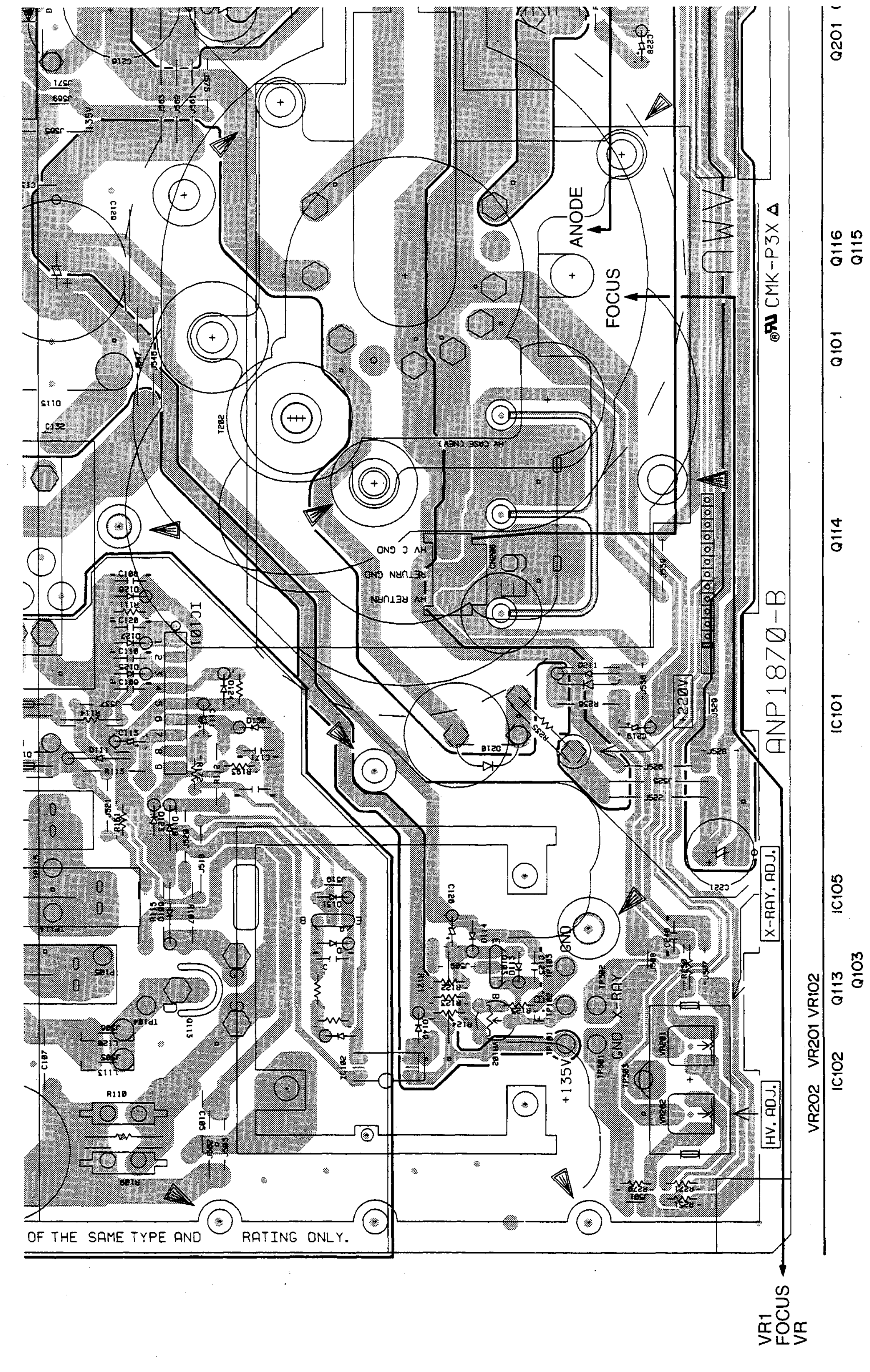
Q204 Q211 Q214 Q106 Q105 Q107 Q104 Q219 Q220 IC103 Q223
Q206 Q212 Q213 Q210 Q207 Q225 Q215 Q216 IC201 Q217 Q218 Q224
Q205 Q209 Q208 Q222 IC202

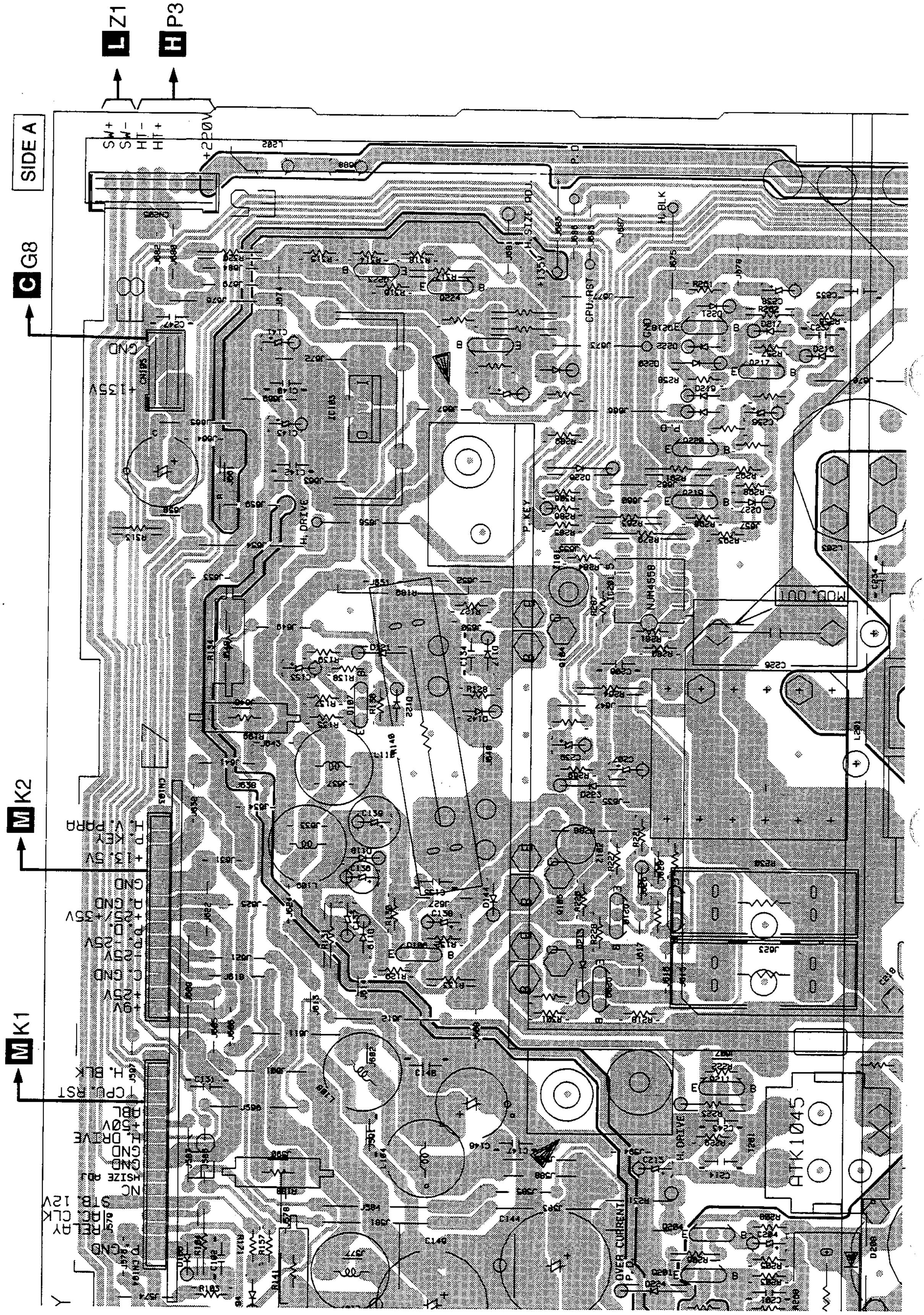
☐ : HIGH VOLTAGE GENERATION POINT
(EXCEPTIG THE CHARGED SECTION)

I POWER SUPPLY SERVICE ASSY

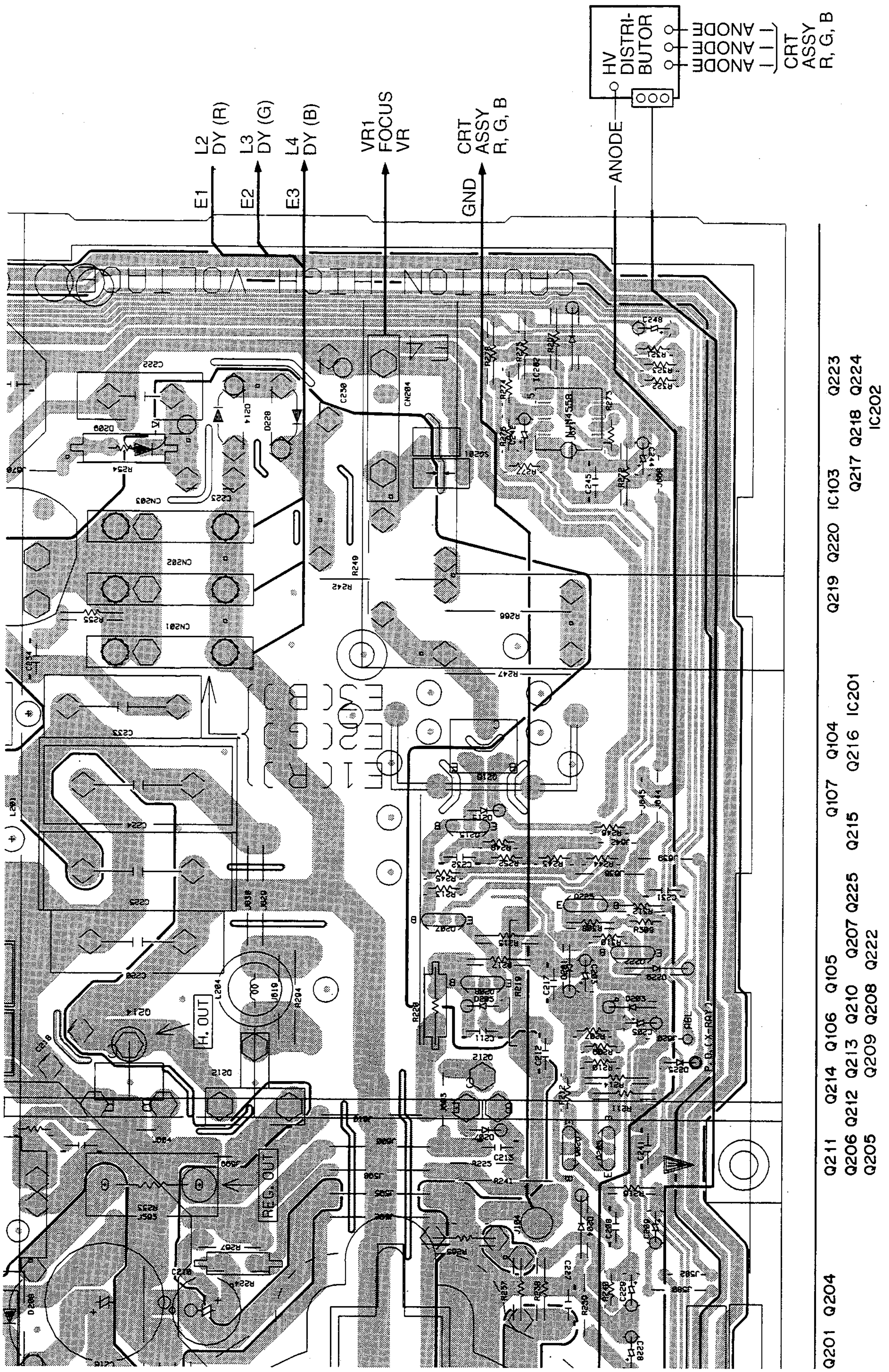
☐ : CHARGED SECTION


CAUTION
PRIMARY
SECONDARY
T102
T101
FU101
FU102
FU103
FU104
FU105
CN101
CN102
AC POWER CORD
-25V
35V
OVER P.D.
FOR CONTINUED PROTECTION AGAINST FIRE HAZARD. REPLACEMENT FUSES SHOULD BE OF THE

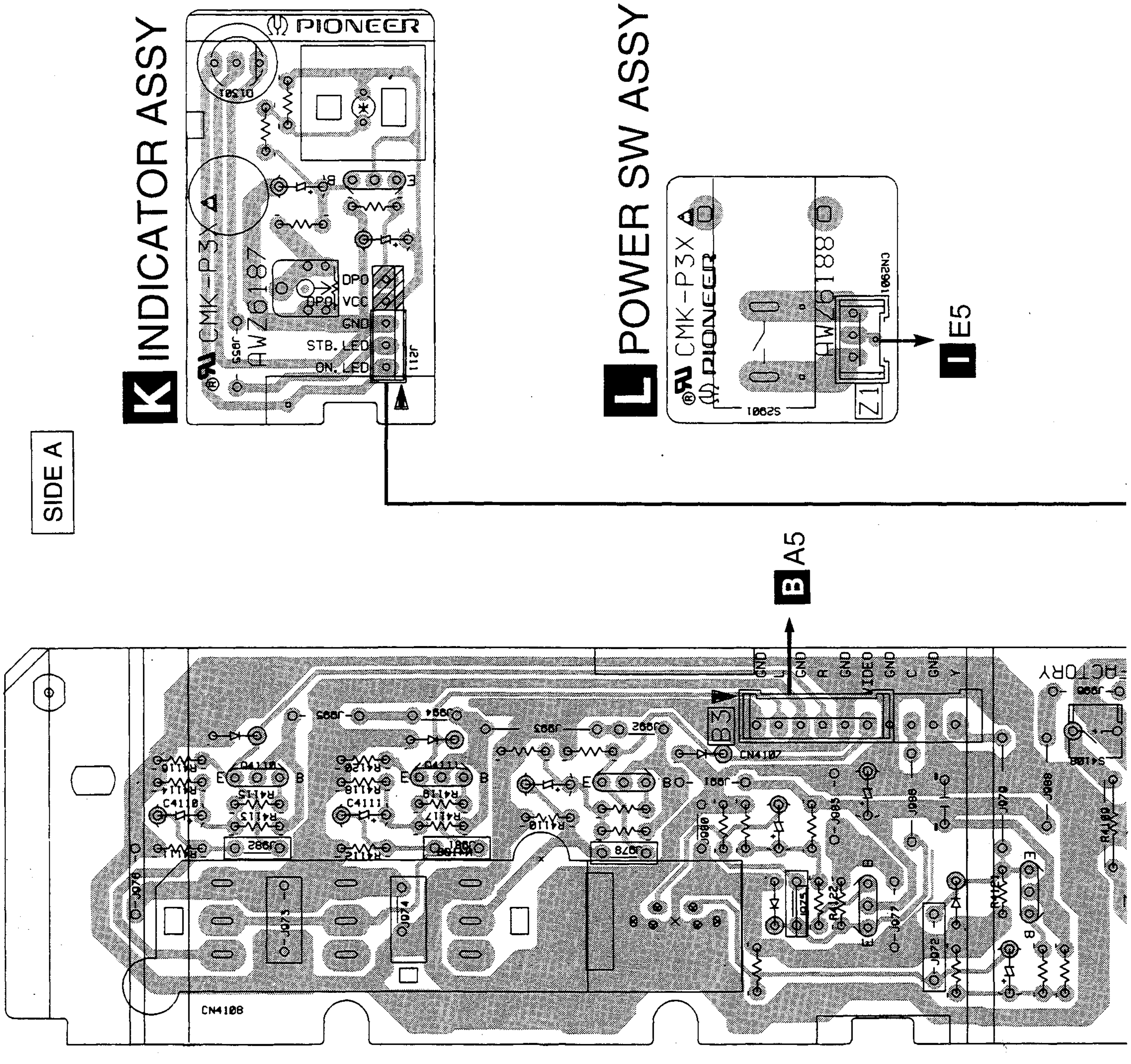

ANODE
FOCUS
CMK-P3X
ANP1870-B
HV CASE (NEW)
HV C GND
RETURN GND
HV RETURN
+220V
X-RAY. ADJ.
HV. ADJ.
GND
X-RAY
+135V
135V
T202
IC101
OF THE SAME TYPE AND RATING ONLY.
VR1
FOCUS
VR
Q201
Q116
Q115
Q101
Q114
IC101
IC105
Q113
Q103
IC102
VR201
VR102
VR202


L Z1
H P3
C G8
M K2
M K1
SIDE A
SW+
SW-
HT-
HT+
+220V
GND
+135V
H. V. PARA
P. KEY
+13.5V
GND
P. GND
+25/+35V
P. D
P. -25V
P. 25V
C. GND
+25V
+9V
H. BLK
CPU. RST
ABL
+50V
H. DRIVE
GND
GND
HSIZE ADJ
NC
STB. 12V
RC. CLK
RELAY
P. GND
H. SIZE ADJ
H. BLK
P. KEY
H. DRIVE
NJM4558
MOD. 001
ATK1045
OVER CURRENT

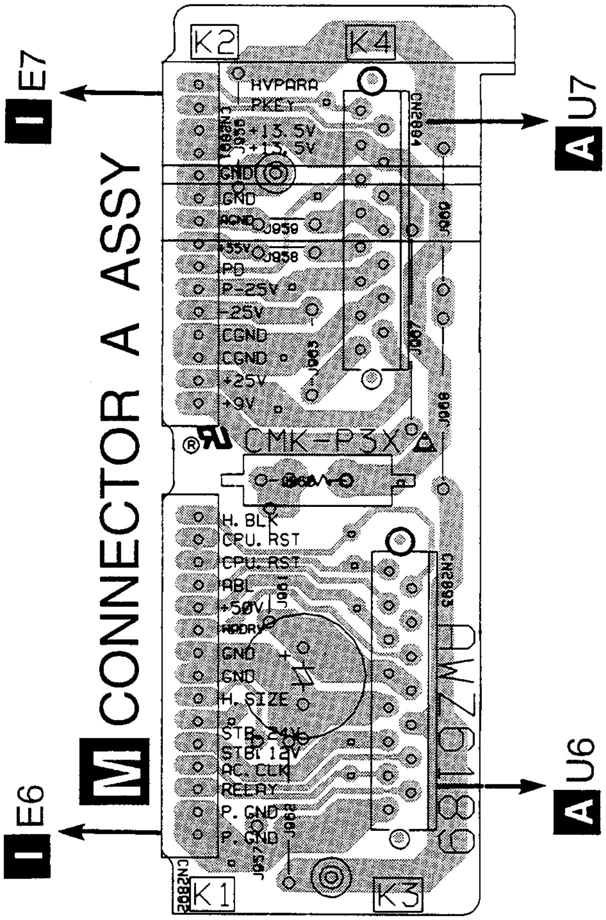
□ : HIGH VOLTAGE GENERATION POINT
(EXCEPTIG THE CHARGED SECTION)


E1
L2
DY (R)
E2
L3
DY (G)
E3
L4
DY (B)
VR1
FOCUS
VR
GND
CRT
ASSY
R, G, B
ANODE
HV
DISTRI-
BUTOR
ANODE
ANODE
ANODE
CRT
ASSY
R, G, B
CAUTION HIGH VOLTAGE
CN201
CN202
CN203
CN204
IC202
NJM4558
H. OUT
REG. OUT
P.B.(X-R01)
Q201 Q204
Q211 Q214 Q106 Q105 Q107 Q104
Q206 Q212 Q213 Q210 Q207 Q225 Q215 Q216 IC201
Q205 Q209 Q208 Q222
Q219 Q220 IC103 Q223
Q217 Q218 Q224
IC202

4.7 FRONT CONTROL, INDICATOR, POWER SW AND CONNECTOR A ASSEMBLIES

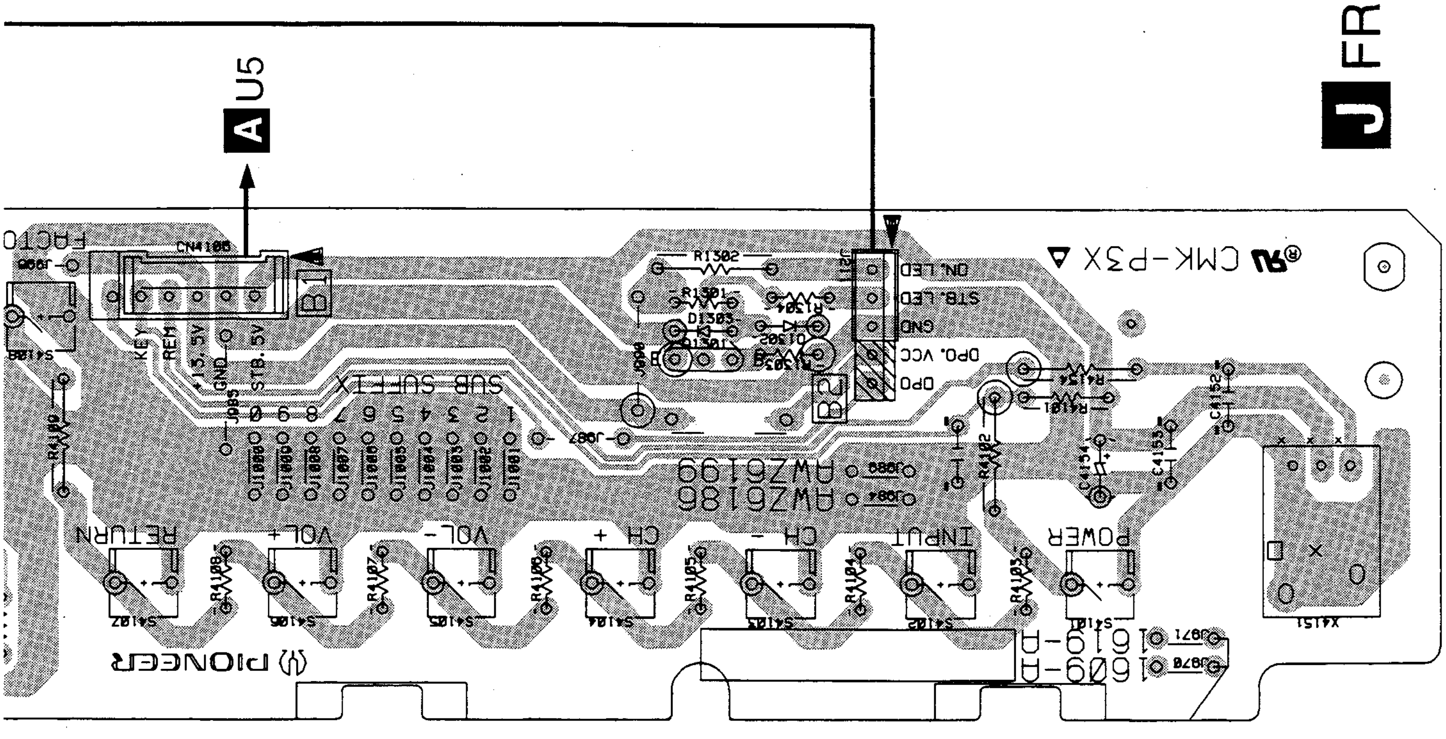

K INDICATOR ASSY
PIONEER
CMK-P3X
AWZ6187
DPO
VCC
GND
STB. LED
ON. LED
J211
L POWER SW ASSY
CMK-P3X
AWZ6188
PIONEER
Z1
S2901
CN2901
I E5
SIDE A
B A5
GND
L
GND
R
GND
VIDEO
GND
C
GND
Y
B3
CN4107
CN4108
C4110
C4111
Q4110
Q4111
R4116
R4114
R4115
R4113
R4120
R4118
R4119
R4117
R4110
J882
J878
J886
J885
J884
J883
J881
J880
J876
J875
J874
J873
J872
J877
J870
J889
J888
S4108
R4190
R4121
R4122
E
B

M CONNECTOR A ASSY


I E7
A U7
I E6
A U6
K2
K4
K1
K3
HVPARA
PKEY
+13.5V
+13.5V
GND
GND
AGND
+35V
PD
P-25V
-25V
CGND
CGND
+25V
+9V
CMK-P3X
H.BLK
CPU.RST
CPU.RST
ABL
+50V
ADDRV
GND
GND
H.SIZE
STB.24V
STB.12V
AC.CLK
RELAY
P.GND
P.GND
CN2084
CN2083
CN2082
AWZ6118

(ANP1871-C)

J FRONT CONTROL ASSY


A U5
CN4100
B1
B2
KEY
REM
+13.5V
GND
STB.5V
SUB SUFFIX
1 2 3 4 5 6 7 8 9 0
AWZ6199
AWZ6186
R1302
R1301
D1303
D1301
R1303
ON.LED
STB.LED
GND
DPO.VCC
DPO
CMK-P3X
RETURN
VOL+
VOL-
CH+
CH-
INPUT
POWER
S4107
S4106
S4105
S4104
S4103
S4102
S4101
X4151
PIONEER
1619-A
1609-A

5. PCB PARTS LIST

NOTES: • *Parts marked by "NSP" are generally unavailable because they are not in our Master Spare Parts List.*

- *The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.*
- *When ordering resistors, first convert resistance values into code form as shown in the following examples.*

Ex.1 When there are 2 effective digits (any digit apart from 0), such as 560 ohm and 47k ohm (tolerance is shown by J=5%, and K=10%).

560 Ω → 56 × 10^1 → 561 .... RD1/4PU $\boxed{5}\boxed{6}\boxed{1}$ *J*
47k Ω → 47 × 10^3 → 473 .... RD1/4PU $\boxed{4}\boxed{7}\boxed{3}$ *J*
0.5 Ω → R50 .... RN2H $\boxed{R}\boxed{5}\boxed{0}$ *K*
1 Ω → 1R0 .... RS1P $\boxed{1}\boxed{R}\boxed{0}$ *K*

Ex.2 When there are 3 effective digits (such as in high precision metal film resistors).

5.62k Ω → 562 × 10^1 → 5621 .... RN1/4PC $\boxed{5}\boxed{6}\boxed{2}\boxed{1}$ *F*

- *Parts marked by ☆ are important parts which relate in X-rays radiation.*
  If any of these parts need to be replaced, always replace with specified parts.
- *Parts marked by × are important parts which relate in X-rays radiation. If a failure occurs in any of these parts, replace the printed circuit board assembly where the relevant part has already been adjusted as a working component. Do not replace the actual part itself.*
  If any part marked by × is replaced, there is danger of being exposed to X-rays.

LIST OF ASSEMBLIES

Mark	No.	Description	Part No.
NSP		TUNER·VIDEO ASSY	AWV1609
		├ TUNER·VIDEO ASSY	AWZ6185
		├ FRONT CONTROL ASSY	AWZ6186
		├ INDICATOR ASSY	AWZ6187
		├ POWER SW ASSY	AWZ6188
		└ CONNECTOR A ASSY	AWZ6189
NSP		AMP ASSY	AWV1611
		├ AMP ASSY	AWZ6190
		├ R CRT AMP ASSY	AWZ6191
		├ G CRT AMP ASSY	AWZ6192
		└ B CRTAMP ASSY	AWZ6193
NSP		AV I/O·CNVR. ASSY	AWV1613
		├ CONVER CONTROL ASSY	AWZ6195
		├ CONNECTOR B ASSY	AWZ6196
		└ AV I/O ASSY	AWZ6197
☆		POWER SUPPLY SERVICE ASSY	AWV1615

A TUNER•VIDEO ASSY

SEMICONDUCTORS

Mark	No.	Description	Part No.
	IC902		AT24C04-10PC
	IC4501		CXA1734S
	IC901		PD5395A
	IC903		PST9146
	IC501		TA8845BN
	Q4501, Q4506, Q4513, Q503, Q504		2SA933S
	Q506, Q509-Q511, Q515-Q517		2SA933S
	Q522, Q523, Q534, Q536, Q702		2SA933S
	Q912, Q913, Q920, Q921		2SA933S
	Q4502-Q4505, Q4507, Q4509, Q4512		2SC1740S
	Q501, Q502, Q505, Q507, Q508		2SC1740S
	Q512-Q514, Q518-Q520		2SC1740S
	Q524-Q533, Q535, Q701, Q703		2SC1740S
	Q902-Q910, Q914-Q919, Q924		2SC1740S
	Q931, Q932		2SC1740S
	Q4510, Q521		2SC2235
	Q911		2SD880
	D4501-D4504, D502-D504		HSS104-02
	D511, D512, D529-D535		HSS104-02
	D539, D540, D543-D545		HSS104-02
	D547, D548, D562, D563, D570		HSS104-02
	D572-D579, D901, D902, D916		HSS104-02
	D922, D923, D926-D930		HSS104-02
	D932-D934, D936, D939, D943		HSS104-02
	D947-D954, D957-D960		HSS104-02
	D962, D963, D973, D985, D996		HSS104-02
	D4508, D4509, D509, D510		MTZJ15
	D513-D519, D523-D527		MTZJ15
	D541, D542, D546, D549-D561		MTZJ15
	D564-D569, D571, D909, D921		MTZJ15
	D972, D981		MTZJ15
	D903-D908, D910-D914		MTZJ6.8
	D917-D920, D924, D925		MTZJ6.8
	D937, D938, D940-D942		MTZJ6.8
	D945, D946, D956, D971		MTZJ6.8
	D976, D977, D979, D984		MTZJ6.8
	D992, D993, D995		MTZJ6.8
	D508		RD10ESB2
	D501		RD2.2ESB1
	D4505		RD33ESB3
	D931		RD5.1ESB2
	D4510		RD5.6ESB2
	D505-D507, D520-D522, D528		S5688G
	D536, D537		S5688G

COILS

Mark	No.	Description	Part No.
	L501-L503, L704		LAU100J
	L701		LAU101J
	L702		LAU150J
	L4501-L4505, L902-L905		LAU2R2J
	L703		LAU3R9J
	L901		LAU8R2J

CAPACITORS

Mark	No.	Description	Part No.
	C4510	(3.3μF, 50V)	ACH1128
	C4504	(10μF, 50V)	ACH1129
	TC901		ACM-020
	C503		CCCCH100D50
	C905		CCCCH270J50
	C4537, C546, C565-C567		CCCSL101J50
	C527, C702, C704		CCCSL121J50
	C949, C950		CCCSL221J50
	C4529, C933, C939, C940, C952		CCCSL470J50
	C544, C703, C933, C939		CCCSL680J50

Mark	No.	Description	Part No.
	C913		CCDSL221J50
	C4502, C4503, C4524, C4527		CEAS100M50
	C4531, C4532, C4538, C4542-C4544		CEAS100M50
	C514, C533, C547, C555, C926		CEAS100M50
	C931, C932		CEAS100M50
	C705, C915, C918, C930		CEAS101M10
	C4517		CEAS101M25
	C524		CEAS102M16
	C4505, C4509, C511, C517, C518		CEAS1R0M50
	C903, C914, C919, C921, C938		CEAS1R0M50
	C557		CEAS221M16
	C506, C512, C548, C551, C552		CEAS2R2M50
	C4520, C4540, C951		CEAS331M16
	C922		CEAS3R3M50
	C508, C515, C519, C522, C531		CEAS470M25
	C537, C550, C559, C562, C568		CEAS470M25
	C927		CEAS470M25
	C523		CEAS471M10
	C4521, C4525		CEAS471M16
	C929		CEAS471M25
	C4501, C4506, C4507, C4514-C4516		CEAS4R7M50
	C4518, C516		CEAS4R7M50
	C910, C911		CEASR10M50
	C4511, C507, C536		CEASR47M50
	C902, C936		CFTXA105J50
	C4508		CFTXA224J50
	C4530, C529, C535, C542, C906		CKCYB102K50
	C545, C701		CKCYB103K50
	C530		CKCYB152K50
	C908.C955		CKCYB222K50
	C526, C528, C543, C956		CKCYB331K50
	C4535, C4536		CKCYB332K50
	C505		CKCYB472K50
	C901		CKCYB561K50
	C4519, C4522, C4523, C4526, C4528		CKCYF103Z50
	C4533, C4539, C4541, C538-C541		CKCYF103Z50
	C570, C907, C909, C916, C917		CKCYF103Z50
	C920, C924, C928		CKCYF103Z50
	C509, C520, C525, C534, C549		CKCYF473Z50
	C556, C560, C569, C904, C925		CKCYF473Z50
	C934		CKCYF473Z50
	C912		CQMA102J50
	C502, C532		CQMA103J50
	C501, C521, C558		CQMA104J50
	C510		CQMA123J50
	C504		CQMA183J50
	C4513		CQMA272J50
	C513		CQMA392J50
	C4512		CQMA473J50
	C553, C554		CQMA683J50

RESISTORS

Mark	No.	Description	Part No.
	R565, R566, R571-R573		RD1/2PM100J
	R567		RD1/2PM150J
	R607		RD1/2PM221J
	R569, R570, R575		RD1/2PM271J
	R4546		RD1/2PM331J
	R657		RD1/2PM6R8J
	R4525		RD1/4LMF122J
	R558		RD1/4LMF220J
	R4514		RN1/4PC4302F
	R4515		RN1/4PC6202F
	R1011, R955		RS1MMF3R9J
	R4545		RS2MMF150J
	R4524		RS2MMF272J
	R559		RS2MMF5R6J
	VR4501	(1kΩ)	ACP1040
	Other Resistors		RD1/4PU□□□J

OTHERS

Mark	No.	Description	Part No.
	DL701	DELAY LINE	ATN1012
		PLUG CORD	ADE-082
	J4501	3P HOUSING WIRE	ADX2240
		SHIELD PLATE	ANK1500
	X901	CERAMIC RESONATOR	ASS1015
	X502	CERAMIC RESONATOR	ASS1019
	X501	CRYSTAL RESONATOR (3.579545MHz)	ASS1091
	CN905	PLUG 5-P	KM250MA5
	CN505	PLUG 9-P	KM250MA9
	CN901	11P SOCKET	KP250NA11
	CN501, CN904	12P SOCKET	KP250NA12
	CN902	13P SOCKET	KP250NA13
	CN506, CN903	15P SOCKET	KP250NA15
		TV FRONT END SYSTEM UNIT	AXF1084
		RF SWITCH	AXF1088

B AV I/O ASSY

SEMICONDUCTORS

Mark	No.	Description	Part No.
	IC1602, IC1603		BA7644AN
	IC3003		HA11579
	IC3002		HD49420FS
	IC3001		HM53461ZP-12
	IC3004		M5233P
	IC3301		MC14011BF
	IC3201		MC14066BF
	IC3005		NJM7805FA
	IC1601		TC4052BF
	IC3006		TC4538BF
	Q1602-Q1604, Q1610, Q1701, Q1702		2SA1162
	Q1704, Q1710, Q3003, Q3202, Q3208		2SA1162
	Q3211, Q3212, Q3301, Q3307, Q3313		2SA1162
	Q4704, Q4705		2SA1162
	Q1614		2SC2458
	Q1601, Q1605-Q1609, Q1611-Q1613		2SC2712
	Q1615-Q1617, Q1703, Q1706-Q1708		2SC2712
	Q1711, Q1804, Q3001, Q3002		2SC2712
	Q3004-Q3013, Q3201, Q3203-Q3207		2SC2712
	Q3209, Q3210, Q3213, Q3214		2SC2712
	Q3302-Q3305, Q3311, Q3312, Q3314		2SC2712
	Q4701-Q4703, Q4706		2SC2712
	Q3310		2SK208
	D1601-D1610, D1619-D1622		1SS226
	D3001-D3003, D3007, D3201-D3207		1SS226
	D4701, D4702		1SS226
	D1611-D1618, D3004, D3301, D3302		1SS352
	D3005, D3100		RD6.8MB

COILS AND FILTERS

Mark	No.	Description	Part No.
	F3001		ATF1166
	L3008		ATH1046
	L1801		ATX1008
	F3002		CTJ1002
	L3201		LAU100J

Mark	No.	Description	Part No.
	L3004, L3005		LAU101J
	L3302		LAU120J
	L4701-L4704		LAU2R2J
	L3003		LAU680J
	L3301		LAU6R8J
	L3001, L3002, L3006, L3007		LAU8R2J
	F3201		VTF1064

CAPACITORS

Mark	No.	Description	Part No.
	C3020, C3053		CCSQCH101J50
	C3047, C3306		CCSQCH121J50
	C3015, C3016, C3055, C3312, C3315		CCSQCH151J50
	C3069		CCSQCH220J50
	C3307		CCSQCH221J50
	C3037		CCSQCH270J50
	C3067, C3068		CCSQCH271J50
	C3048, C3052		CCSQCH330J50
	C3054		CCSQCH470J50
	C3314		CCSQCH680J50
	C3313		CCSQCH681J50
	C3305		CCSQCH821J50
	C3308		CCSQSL122J50
	C3208		CCSQSL151J50
	C4711		CCSQSL470J50
	C3044		CEANP100M35
	C1601-C1604, C1606-C1609, C3027		CEAS100M50
	C3039, C3051, C3056, C3060, C3066		CEAS100M50
	C3310, C4702-C4704, C4714, C4717		CEAS100M50
	C3012, C3028, C3034, C3040, C3070		CEAS101M10
	C3072, C3074		CEAS101M10
	C1810, C3201, C3203, C3205, C3302		CEAS101M25
	C3304		CEAS101M25
	C1611, C1612, C1614-C1618, C1636		CEAS1R0M50
	C1704		CEAS1R0M50
	C3013, C3014, C3023, C3050		CEAS220M50
	C1619, C1621, C1623, C1629, C1630		CEAS221M16
	C1637, C1641, C3071		CEAS221M16
	C3017		CEAS2R2M50
	C3319		CEAS330M35
	C4710, C4716		CEAS331M16
	C1632, C1634, C1707, C3022, C3206		CEAS470M25
	C3311, C3316, C3318		CEAS470M25
	C1627, C4701, C4708		CEAS471M16
	C3036		CEAS4R7M50
	C3025, C3026		CEASR22M50
	C3018, C3019		CEASR47M50
	C3078		CEHAQ101M10
	C3077		CEHAQ101M25
	C3038, C3041		CEJA1R0M50
	C3064, C3065		CFTXA334J50
	C3309		CKSQYB392K50
	C1703, C3024, C3059, C4707		CKSQYF102Z50
	C1701, C1702, C3006, C3035, C3045		CKSQYF103Z50
	C3083, C3202, C3204, C3303		CKSQYF103Z50
	C1605, C1610, C1620, C1622		CKSQYF104Z50
	C1625, C1626, C1628, C1631, C1640		CKSQYF104Z50
	C1705, C1808, C1809, C3005, C3007		CKSQYF104Z50
	C3009-C3011, C3021, C3029, C3030		CKSQYF104Z50
	C3032, C3033, C3043, C3057, C3058		CKSQYF104Z50
	C3063, C3073, C3075, C3076		CKSQYF104Z50
	C3080-C3082, C3207, C3301, C3317		CKSQYF104Z50
	C4705, C4706, C4709, C4712, C4713		CKSQYF104Z50
	C4715		CKSQYF104Z50
	C3001-C3004, C3042, C3046		CKSQYF223Z50
	C3049		CKSQYF333Z50
	C3061, C3062		CQMA153J50
	C3031		CQMA681J50

RESISTORS

Mark	No.	Description	Part No.
	R1674		RD1/4LMF220J
	R1668		RS1/2S221J
	R3213		RS1MMF560J
	R3068, R3069, R3100		RS2MMF3R9J
	R1699		RS2MMF5R6J
	VR3002	(470Ω)	ACP1039
	VR3001, VR4701	(1kΩ)	ACP1040
	VR3003		VRTS6VS222
	Other Resistors		RS1/10S□□□J

OTHERS

Mark	No.	Description	Part No.
	CN1602	PIN JACK(9P)	AKB1251
	CN1771	PIN JACK 1-P	AKB7042
		HEAT SINK M	ANH-697
	X3001	CRYSTAL RESONATOR (3.579545MHz)	ASS1091
	CN1603	PLUG 6-P	KM250MA6
	CN3002	12P PLUG	KM250NA12L
	CN3003	13P PLUG	KM250NA13L
	CN3001	PLUG 15-P	KM250NA15L
	TV FRONT END SYSTEM UNIT		AXF1084
	SCREW		PBZ30P080FMC

C AMP ASSY

SEMICONDUCTORS

Mark	No.	Description	Part No.
	IC1402		LA4280-P
	IC1401		M5222L
	IC1403		NJM4558DXP
	IC2604		NJM78M05FA
	IC2603		NJM79M05FA
	IC2601, IC2602		STK392-110
	Q3407		2SA1837
	Q1405, Q1409, Q1429, Q2608-Q2610		2SA933S
	Q3408		2SA933S
	Q2607		2SB950A
	Q1401-Q1404, Q1406, Q1408		2SC1740S
	Q1410, Q1411, Q1428, Q2601-Q2604		2SC1740S
	Q2606, Q2611, Q2612, Q3401-Q3403		2SC1740S
	Q3405, Q3409-Q3411		2SC1740S
	Q3404		2SC2235
	Q3406		2SC4793
	Q2605		2SD1276A
	Q1407		2SK373
	D2614		BR3371XJ30A
	D1405, D1407, D1408, D1411-D1421		HSS104-02
	D1423-D1427, D2613, D2616-D2619		HSS104-02
	D3403, D3404, D3407, D3410		HSS104-02
	D1401-D1404		MTZJ15
	D3408, D3409		MTZJ39
	D1406, D1422		MTZJ5.1
	D1409, D1410		MTZJ6.8
	D2601-D2612, D3405, D3406		S5688G

COILS

Mark	No.	Description	Part No.
	L3401		LAU330J
	L3402		LAU4R7J

CAPACITORS

Mark	No.	Description	Part No.
	C1436		CCCCH100D50
	C2607-C2609, C2618-C2620		CCCCH151J50
	C3417		CCCCH180J50
	C2623-C2628		CCCCH221J50
	C3416		CCCCH390J50
	C1432, C1437		CCCCH470J50
	C1407, C1408		CCCSL101J50
	C1412, C1418, C2639, C2640, C2648		CCCSL151J50
	C3423, C3425		CCCSL221K2H
	C2642		CEANP100M35
	C1401, C1402, C1430, C1441, C3405		CEAS100M50
	C1431, C1443		CEAS101M10
	C2629, C2633, C3412, C3413		CEAS101M25
	C1424		CEAS102M35
	C1440, C1442, C3426, C3427		CEAS1R0M50
	C1406		CEAS221M16
	C3419		CEAS221M25
	C2601, C2602, C2610-C2613		CEAS221M35
	C2621, C2622, C2644, C2645		CEAS221M35
	C1415, C1416		CEAS2R2M50
	C1413, C1417		CEAS330M35
	C1419, C1428		CEAS331M25
	C2630, C2635		CEAS331M6R3
	C1403, C1404, C1409, C1438, C2643		CEAS470M25
	C3401, C3428		CEAS470M25
	C1414		CEAS470M50
	C1420, C1425		CEASR10M50
	C1410, C1411		CEASR47M50
	C3403, C3422		CEHAQ220M2C
	C3409		CEHAQ2R2M2C
	C1434, C2637, C2638, C2641		CKCYB102K50
	C3420, C3421		CKCYB102K50
	C1444, C1445		CKCYB332K50
	C1433, C1435		CKCYB331K50
	C2603-C2606, C2614-C2617		CKCYF103Z50
	C2631, C2632, C2634, C2636		CKCYF103Z50
	C2646, C2647, C2649-C2651, C3402		CKCYF103Z50
	C3410, C3411		CKCYF103Z50
	C1405, C1421, C1423, C1427, C1429		CKCYF473Z50
	C1439		CKCYF473Z50
	C3404, C3418		CKDYE103P2H
	C3406		CQMA103J50
	C3415		CQMA104J50
	C3414		CQMA104K2E
	C3407, C3408		CQMA472K2E

RESISTORS

Mark	No.	Description	Part No.
	R3402		RD1/2LMF331J
	R2654, R2656, R2657, R2659, R2660		RD1/2PM151J
	R2662		RD1/2PM151J
	R1431, R1432		RD1/2PM152J
	R3418, R3419		RD1/2PM183J
	R3424, R3425		RD1/2PM2R2J
	R1406		RD1/4LMF150J
	R1423, R1425		RD1/4LMF2R2J
	R3422, R3423		RD1/4LMF390J
	R3401		RD1/4LMF4R7J
	R3421		RS1MMF102J
	R3411		RS1MMF121J
	R2601, R2602, R2611, R2612		RS1MMF220J
	R2605-R2607, R2615-R2617		RS1MMF2R2J
	R2655, R2658, R2661		RS1MMF470J
	R2637		RS1MMF562J
	R2603, R2604, R2613, R2614		RS1MMFR47J
	R3408, R3431		RS2MMF102J
	R2636, R2652		RS2MMF2R2J
	R1424, R1463, R1464		RS2MMF2R7J
	R2638, R2653		RS2MMF4R7J
	R2634, R2635, R2668-R2670, R2687		RS3LMF120J
	R2651		RS3LMF1R8J
	R2667		RS3LMF2R2J
	R3426		RS3LMF561J
		Other Resistors	RD1/4PU☐☐☐J

OTHERS

Mark	No.	Description	Part No.
		SCREW	ABA1227
		PLATE SPRING	ANG1569
		HEAT SINK M	ANH-697
		AUDIO HEAT SINK	ANH1533
		SCREW	BBZ30P080FCU
	CN2604, CN2605	13P PLUG	KM200IA13
	CN3402	PLUG 3-P	KM250MA3L
	CN3401	PLUG 3-P	KM250MA3LR
	CN1401, CN3403	PLUG 4-P	KM250MA4L
	CN2602	PLUG 6-P	KM250MA6L
	CN2601	PLUG 6-P	KM250MA6LR
	CN2606	L-PLUG(8P)	KM250MA8L
	CN1402	11P PLUG	KM250NA11L
	CN2608	12P PLUG	KM250NA12L
	CN2607	PLUG 15-P	KM250NA15L
		SCREW	PBZ30P080FMC

D CONVER CONTROL ASSY

SEMICONDUCTORS

Mark	No.	Description	Part No.
	IC2309		CA0005AM
	IC2304-IC2306		NJM4558MD
	IC2307, IC2308		PA0053B
	IC2301-IC2303		PM0011AS
	Q2301, Q2303, Q2305, Q2307, Q2311		2SA1162
	Q2302, Q2304, Q2306, Q2308, Q2312		2SC2712
	D2301, D2303-D2311, D2315		1SS226
	D2318-D2320		1SS226
	D2312		RD15MB
	D2302		RD5.1MB
	D2313, D2316, D2317		RD6.8MB

CAPACITORS

Mark	No.	Description	Part No.
	C2332-C2337, C2345-C2350		CCSQSL101J50
	C2356-C2361		CCSQSL101J50
	C2364		CCSQSL120J50
	C2372, C2373		CCSQSL221J50
	C2366		CCSQSL680J50
	C2324, C2325, C2363, C2370, C2371		CEAS100M50
	C2375		CEAS101M25
	C2301, C2303, C2313, C2376		CEAS1R0M50
	C2316		CEAS1R5M50
	C2378		CEAS220M50
	C2339		CEAS221M16
	C2314, C2380		CEAS330M35
	C2308, C2310, C2319, C2321		CEAS331M6R3
	C2329, C2330, C2341, C2343, C2352		CEAS331M6R3
	C2354, C2382, C2384		CEAS331M6R3
	C2379		CEAS470M25
	C2377		CEASR47M50
	C2338		CFTXA104J50
	C2315		CFTYA184J50

Mark	No.	Description	Part No.
	C2317,C2323		CFTYA224J50
	C2306,C2307,C2309,C2318,C2320		CKSQYF104Z50
	C2322,C2326-C2328,C2331,C2340		CKSQYF104Z50
	C2342,C2344,C2351,C2353,C2355		CKSQYF104Z50
	C2362,C2365,C2367-C2369,C2374		CKSQYF104Z50
	C2381,C2383,C2385-C2388		CKSQYF104Z50
	C2305,C2312		CQMA102J50
	C2302,C2304		CQMA471J50
	C2311		CQPA152J2A

RESISTORS

Mark	No.	Description	Part No.
	All Resistors		RS1/10S□□□J

OTHERS

Mark	No.	Description	Part No.
	CN2301,CN2302	CABLE HOLDER	AKT1011

E CONNECTOR B ASSY

OTHERS

Mark	No.	Description	Part No.
	CN2303,CN2304	CABLE HOLDER	AKT1011
	CN2305,CN2306	13P SOCKET	KP200IA13L

F R CRT AMP ASSY

SEMICONDUCTORS

Mark	No.	Description	Part No.
	Q2701		2SC3271F
	D2701		HSS104-02

COILS

Mark	No.	Description	Part No.
	L2703		LAU101J
	L2701,L2702		LAU470J

CAPACITORS

Mark	No.	Description	Part No.
	C2704	(1000pF, 2kV)	ACG1001
	C2701		CEAS101M25
	C2702		CKCYB681K50

RESISTORS

Mark	No.	Description	Part No.
	R2705	(47Ω,1/2W)	ACN-225
	R2702	(1kΩ,1/2W)	ACN1006
⚠	R2703,R2704		RS3LMF392J
	Other Resistors		RD1/4PU□□□J

OTHERS

Mark	No.	Description	Part No.
	SG2702	SPARK GAP	AEX-019
	SG2701	SPARK GAP	AEX1024
	CN2701	CRT SOCKET	AKG1005
	HEAT SINK M		ANH1541
	CN2702	PLUG 3-P	KM250MA3R
	SCREW		PMB30P100FMC

G G CRT AMP ASSY

SEMICONDUCTORS

Mark	No.	Description	Part No.
	Q2731		2SC3271F
	D2731		HSS104-02

COILS

Mark	No.	Description	Part No.
	L2733		LAU101J
	L2731,L2732		LAU470J

CAPACITORS

Mark	No.	Description	Part No.
	C2734	(1000pF,2kV)	ACG1001
	C2733	(4.7μF,250V)	ACH1283
	C2731		CEAS101M25
	C2732		CKCYB681K50

RESISTORS

Mark	No.	Description	Part No.
	R2735	(47Ω,1/2W)	ACN-225
	R2732	(1kΩ,1/2W)	ACN1006
⚠	R2733,R2734		RS3LMF392J
	Other Resistors		RD1/4PU□□□J

OTHERS

Mark	No.	Description	Part No.
	SG2732	SPARK GAP	AEX-019
	SG2731	SPARK GAP	AEX1024
	J2,J3	LEAD WITH 4P HOUSING	ADX2271
	CN2731	CRT SOCKET	AKG1005
	HEAT SINK M		ANH1541
	CN2732	PLUG 3-P	KM250MA3
	SCREW		PMB30P100FMC

H B CRT AMP ASSY

SEMICONDUCTORS

Mark	No.	Description	Part No.
	Q2761		2SC3271F
	D2761		HSS104-02

COILS

Mark	No.	Description	Part No.
	L2763		LAU101J
	L2761,L2762		LAU470J

CAPACITORS

Mark	No.	Description	Part No.
	C2764	(1000pF,2kV)	ACG1001
	C2761		CEAS101M25
	C2762		CKCYB681K50

RESISTORS

Mark	No.	Description	Part No.
	R2765	(47Ω,1/2W)	ACN-225
	R2762	(1kΩ,1/2W)	ACN1006
⚠	R2763,R2764		RS3LMF392J
	Other Resistors		RD1/4PU□□□J

OTHERS

Mark	No.	Description	Part No.
	SG2762	SPARK GAP	AEX-019
	SG2761	SPARK GAP	AEX1024
	CN2761	CRT SOCKET	AKG1005
	HEAT SINK M		ANH1541
	CN2762	PLUG 3-P	KM250MA3B
	CN2763	PLUG 5-P	KM250MA5
	SCREW		PMB30P100FMC

I POWER SUPPLY SERVICE ASSY

SEMICONDUCTORS

Mark	No.	Description	Part No.
⚠	IC101		AN8029
×	IC201,IC202		NJM4558DXP
	IC103		NJM7809FA
	IC102,IC105		PC817CD
	Q201,Q204		2SA1145
×	Q205,Q206		
	Q107,Q116		2SA933S
	Q209,Q210,Q217,Q224		2SA933S
×	Q101,Q106,Q114,Q115,Q207		2SC1740S
	Q215,Q218-Q220,Q223		2SC1740S
×	Q103,Q208		2SC2705
	Q211		2SC3332
	Q216		2SC4686A
⚠	Q214		2SC5299
	Q212		2SD1276A
	Q104,Q105,Q213		2SD2399

Mark	No.	Description	Part No.
⚠	Q113		2SK1938
	D112,D192,D193		10DF2
	D199		BR3371XJ30A
×	D211		ERA22-02
⚠	D209		ERB06-15
	D210,D214,D228		ERB06-15
	D208		ERB93-02L3
	D116,D136		ERC90M-02
	D115		ERD29-06J
⚠	D212		ESC021M-15
	D113,D122,D137-D142		HSS104-02
	D144-D146,D149,D194,D201		HSS104-02
	D205,D207,D215-D217		HSS104-02
	D219-D222,D224-D227		HSS104-02
	D119		HZS18-1L
	D106,D118,D121		HZS6B1L
	D114		HZS6C2L
	D101		LN6SB60-4000
	D150		MA723
	D123		MTZJ12
×	D204		
	D109,D110,D131		MTZJ20
	D111		MTZJ24
	D124-D127,D190		MTZJ5.1
	D117		RD5.1ESB1
⚠×	D203		
	D223		RD5.1ESB1
	D102-D105		S5688G

COILS

Mark	No.	Description	Part No.
	L111,L112		ATF1183
	L104,L107-L110,L204		ATH-059
⚠	L201		ATL1131
⚠	L203		ATL1132
	L113,L120		ATX1021
	L202		LTA272J

TRANSFORMERS

Mark	No.	Description	Part No.
⚠	T101		ATK1107
	T102		ATT1272
⚠	T201		ATK1045
⚠×	T202		

RELAYS

Mark	No.	Description	Part No.
	RY102		ASR1036
⚠	RY101		BSR1009

CAPACITORS

Mark	No.	Description	Part No.
	C121-C124	(4700pF, 250V)	ACE1105
⚠	C127,C128	(0.22μF, 250V)	ACE1107
	C132	(100pF, 2kV)	ACG-032
	C118,C119	(0.01μF, 250V)	ACG-501
	C222	(1500pF, 2kV)	ACG1007
	C106	(3300pF, 2kV)	ACG1008
	C223	(270pF, 2kV)	ACG1010
	C218	(680pF, 2kV)	ACG1024
	C230	(4700pF, 2kV)	ACG1028
	C105,C107	(2200pF, 2kV)	ACG1046
	C216	(10μF, 160V)	ACH1117
	C115,C129	(470μF, 200V)	ACH1147
	C114	(820μF, 200V)	ACH1148
	C152,C156,C202,C211,C213		CCCSL101K2H
	C133,C150		CCCSL221K2H
	C243		CCCSL271K2H
	C219,C238,C239,C242		CEAS100M50
	C246		CEAS1R0M50
	C229		CEAS4R7M50
	C248		CEASR10M50
	C210		CEHAQ100M2C
	C137,C138,C151,C153,C165		CEHAQ100M50
	C207		CEHAQ100M50
	C141,C143,C204		CEHAQ101M16
	C113		CEHAQ101M50
	C101		CEHAQ102M25
	C111,C126,C136		CEHAQ1R0M50
	C221		CEHAQ220M2C
	C228		CEHAQ220M50
	C205,C209		CEHAQ221M10
	C139,C203		CEHAQ221M16
	C144,C145,C149		CEHAQ222M35
	C215		CEHAQ2R2M50
	C146		CEHAQ331M35
	C163,C164,C170		CEHAQ470M25
	C157		CEHAQ4R7M2A
	C225		CFPA103J3C
	C224		CFPA153J3C
	C220		CFPA562J3C
	C233		CFPMA564J2E
	C226		CFPMA824J2E
	C231		CFTYA105J50
	C240		CKCYB102K50
	C201,C208,C217		CKCYB103K50
	C212,C214,C234		CKCYB222K2H
	C241,C247		CKCYB222K50
	C120		CKCYB471K50
	C135		CKCYB681K50
	C102		CKCYF103Z50
	C134,C140,C142,C147,C148		CKCYF473Z50
	C206,C227		CKCYF473Z50
	C130		CKDYE103P2H
	C131		CKDYF103Z50
	C125,C237		CQMA103J50
	C108,C110		CQMA182J50
	C235		CQMA223J50
	C171		CQMA333J50
	C109		CQMA473J50
	C232		CQMA683J50

RESISTORS

Mark	No.	Description	Part No.
	R241	(47Ω, 1/2W)	ACN-225
	R159	(1MΩ, 1/2W)	ACN1008
	R249	(33kΩ, 1/2W)	ACN1011
	R101,R102,R233	(1Ω, 5W)	ACN1032
⚠	R268	(1Ω, 5W)	ACN1032
	R160	(2.2MΩ, 1/2W)	BCN1022
	R113		RD1/2LMF100J
	R107,R112		RD1/2LMF220J
	R224		RD1/2LMF222J
	R239		RD1/2LMF562J
	R238		RD1/2PM122J
×	R215		RD1/2PM361J
	R255		RD1/2PM561J
⚠	R231		RD1/4LMF221J
	R236		RD1/4LMF2R2J
⚠	R288		RD1/4LMF3R9J
⚠	R267		RD1/4LMF470J
	R225		RD1/4LMF471J
	R115		RD1/4LMF681J
	R237,R265		RN1/2PC3902F

Mark	No.	Description	Part No.
	R123,R124		RN1/4PC1603F
	R133		RN1/4PC2101F
	R132		RN1/4PC2431F
	R125		RN1/4PC3601F
	R270		RN1/4PC7502F
	R235		RS1LMF220J
	R163,R164		RS1MMF333J
	R116		RS1MMF473J
×	R220		
	R177		RS1MMF820J
	R109,R110		RS1MMFR22J
	R294		RS2LMF100J
	R121		RS2LMF223J
	R141,R188		RS2MMF100J
	R254		RS2MMF153J
	R134,R199		RS2MMF1R2J
	R242,R247,R266		RS3LMF104J
	R219		RS3LMF682J
	R189		RS3LMFR68J
	R161,R162,R179		RT10PZ120K
	R140		RT10PZ1R5K
	R230		RT5PZ470K
×	R207		
×	R209		
×	R214		
×	R215		
×	R212		
×	R213		
×	R210		
×	R236		
×	R272		
×	R273		
×	R274		
×	R275		
×	R276		
×	R277		
×	R297		
×	R216		
×	R217		
×	R218		
×	R250		
×	R251		
×	R270		
×	R271		
×	VR201	(1kΩ)	
×	VR202	(22kΩ)	
	VR102		VRTS6VS102
		Other Resistors	RD1/4PU□□□J

OTHERS

Mark	No.	Description	Part No.
	SG201	SPARK GAP	AEX1024
	J27	HV RETURN WIRE	ADX2338
	J26	HV CABLE	ADY1032
		NYLON BINDER	AEC-093
	CN201-CN204	PLUG 3-P	AKM1055
	CN101	PLUG 2-P	AKM1130
	H101-H104,H151-H154		AKR1003
		HEAT SINK M	ANH-697
		HEAT SINK	ANH-880
		HEAT SINK B	ANH1021
		HEAT SINK	ANH1371
		SW HEAT SINK	ANH1505
⚠ NSP		HV DISTRIBUTOR	AXW1046

Mark	No.	Description	Part No.
		SCREW	BBZ30P080FCU
		SCREW	BBZ30P100FZK
	CN103,CN104	15P PLUG	KM200IA15
	CN105	PLUG 4-P	KM250MA4
	CN205	PLUG 7-P	KM250MA7
		SCREW	PBH30P120FNI
		SCREW	PBZ30P080FMC
		SCREW	VPZ40P100FMC
⚠	FU102	FUSE (500mA/125V)	AEK1010
⚠	FU105	FUSE (4A/125V)	REK1082
⚠	FU104	FUSE (6.3A/125V)	REK1085
⚠	FU101	FUSE (8A/125V)	REK1086

J FRONT CONTROL ASSY

SEMICONDUCTORS

No.	Part No.
Q1301	2SA933S
Q4110,Q4111	2SC1740S
D1302,D1303	HSS104-02

SWITCHES

No.	Part No.
S4101-S4108	VSG1009

CAPACITORS

No.	Part No.
C4152	CCCSL121J50
C4154	CEAS101M10
C4110,C4111	CEJA1R0M50
C4153	CKCYF103Z50

RESISTORS

No.	Part No.
R1302	RD1/2PMF561J
Other Resistors	RD1/4PU□□□J

OTHERS

No.	Description	Part No.
CN4108	PIN JACK(3P)	AKB1250
CN4106	PLUG 5-P	KM250MA5
CN4107	PLUG 6-P	KM250MA6

K INDICATOR ASSY

SEMICONDUCTOR

No.	Part No.
D1301	AEL1152

L POWER SW ASSY

SWITCH

No.	Part No.
S2901	ASG1083

OTHERS

No.	Description	Part No.
CN2901	PLUG 3-P	KM250MA3

M CONNECTOR A ASSY

OTHERS

No.	Description	Part No.
CN2891,CN2892	15P SOCKET	KP200IA15L

6. ADJUSTMENT

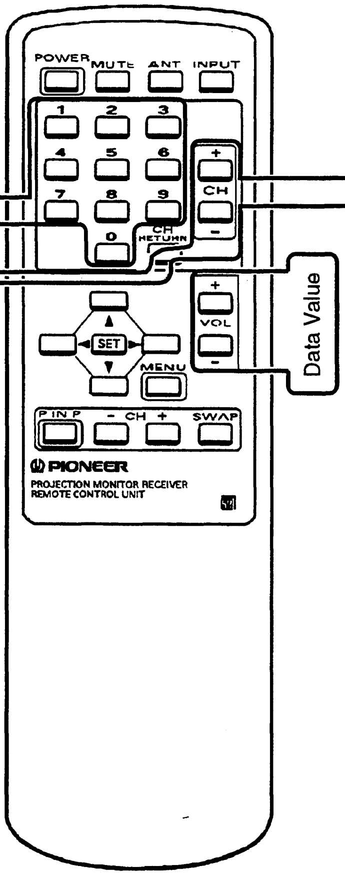
■ Key Indication of the Remote Control Unit

← CH –   CH + →

GV (Green, Vertical)   RH (Red, Horizontal)

GH (Green, Horizontal)   RV (Red, Vertical)

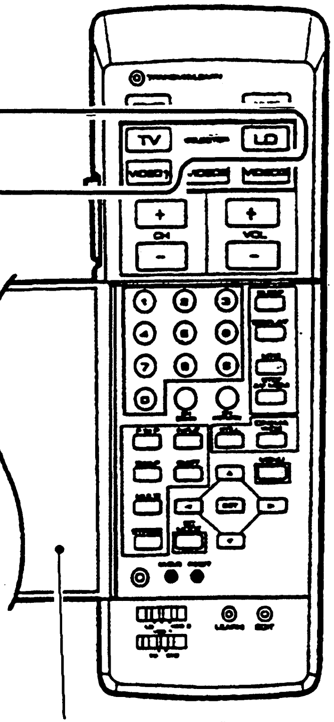
BV (Blue, Vertical)   BH (Blue, Horizontal)


POWER
MUTE
ANT
INPUT
1
2
3
4
5
6
7
8
9
0
CH RETURN
+
CH
–
+
VOL
–
SET
MENU
PinP
– CH +
SWAP
PIONEER
PROJECTION MONITOR RECEIVER
REMOTE CONTROL UNIT
Data Value

• Adjustment Items

Adjustment		Adjustment Name	Numeric Keys	Adjustment Items	Type					
RANGE	OFFSET				GH	GV	RH	RV	BH	BV
	○	CUT-R	0	STATIC	○	○	○	○	○	○
○		VOL0								
○		Color	1	SKEW	○	○	○	○	○	○
○		Tint	2	BOW	○	○	○	○	○	○
				4TH BOW	○		○		○	
○	○	Contrast	3	SUB KEY	○	○	○	○	○	○
○	○	Bright	4	KEY	○	○	○	○	○	○
				MID KEY		○		○		○
○	○	Sharpness	5	MS PIN	○	○	○	○	○	○
				SUB PIN	○		○		○	
				4S PIN	○		○		○	
				SC PIN		○		○		○
			6	PIN	○	○	○	○	○	○
				MID PIN	○	○	○	○	○	○
				4TH PIN	○	○	○	○	○	○
○		VOL20	7	LIN	○	○	○	○	○	○
				4TH LIN	○		○		○	
○		VOL30	8	SIZE	○	○	○	○	○	○
	○	DRV-G								
○		STEREO WIDE ON / OFF	9	SUB LIN	○	○	○	○	○	○
	○	DRV-B								

VR : Adjust GH, GV with semifixed VR


TV
LD
VIDEO1
CH
VOL

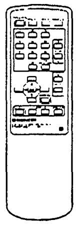
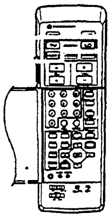
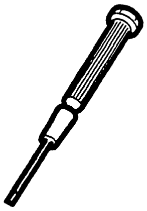
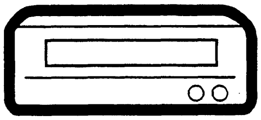
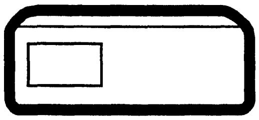
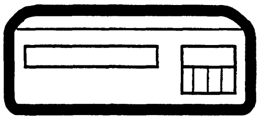
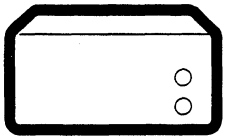
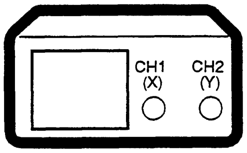
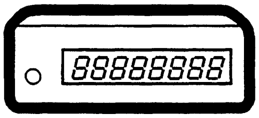
(The upper cover is opened)

OFFSET → CH + : CUT-G
CONVER → CH – : CUT-B

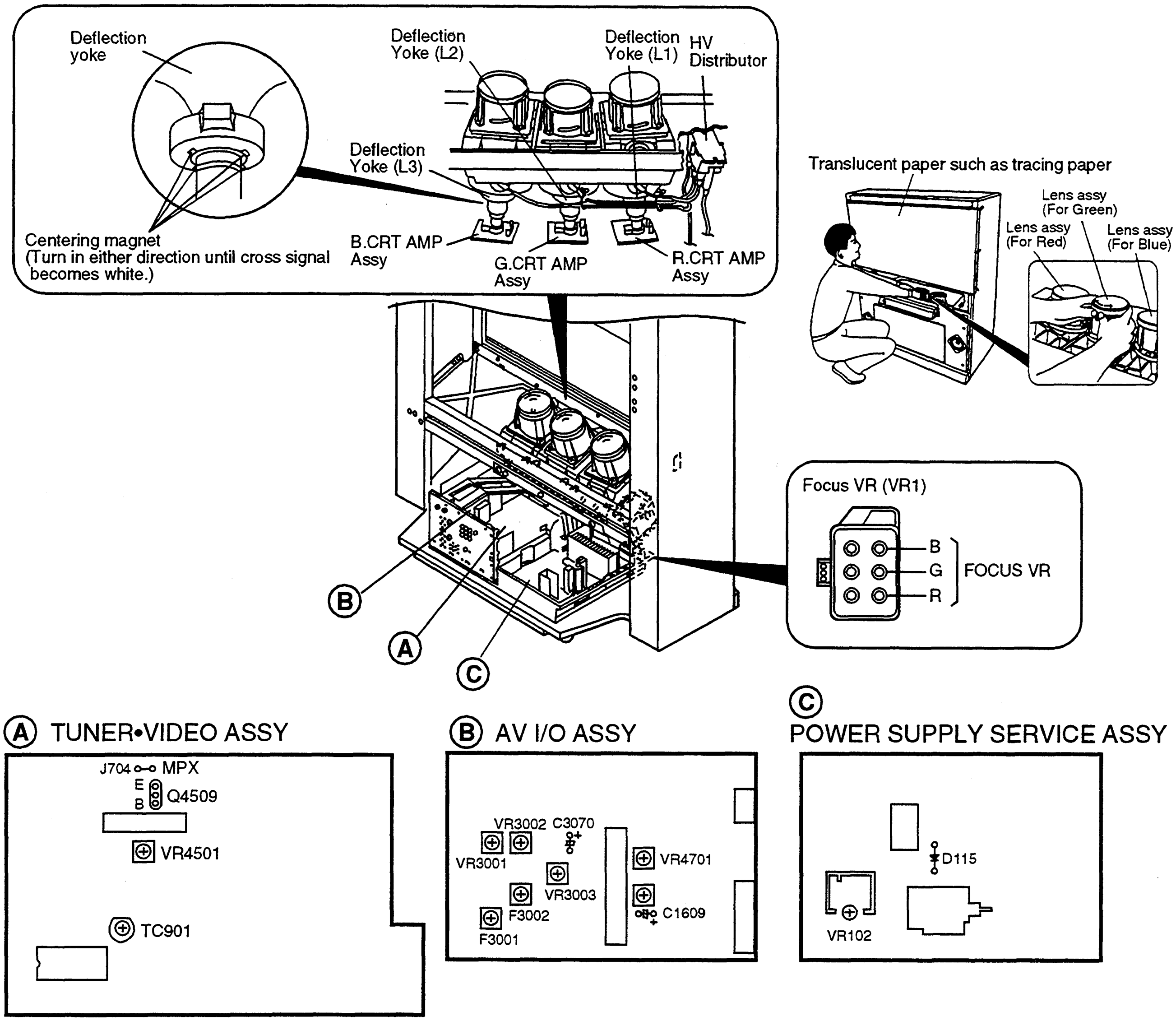
(To output Red, Green and Blue separately)

TV : To output Red ON/OFF
LD : To output Green ON/OFF
VIDEO1 : To output Blue ON/OFF

■ Jigs and Measuring Instruments

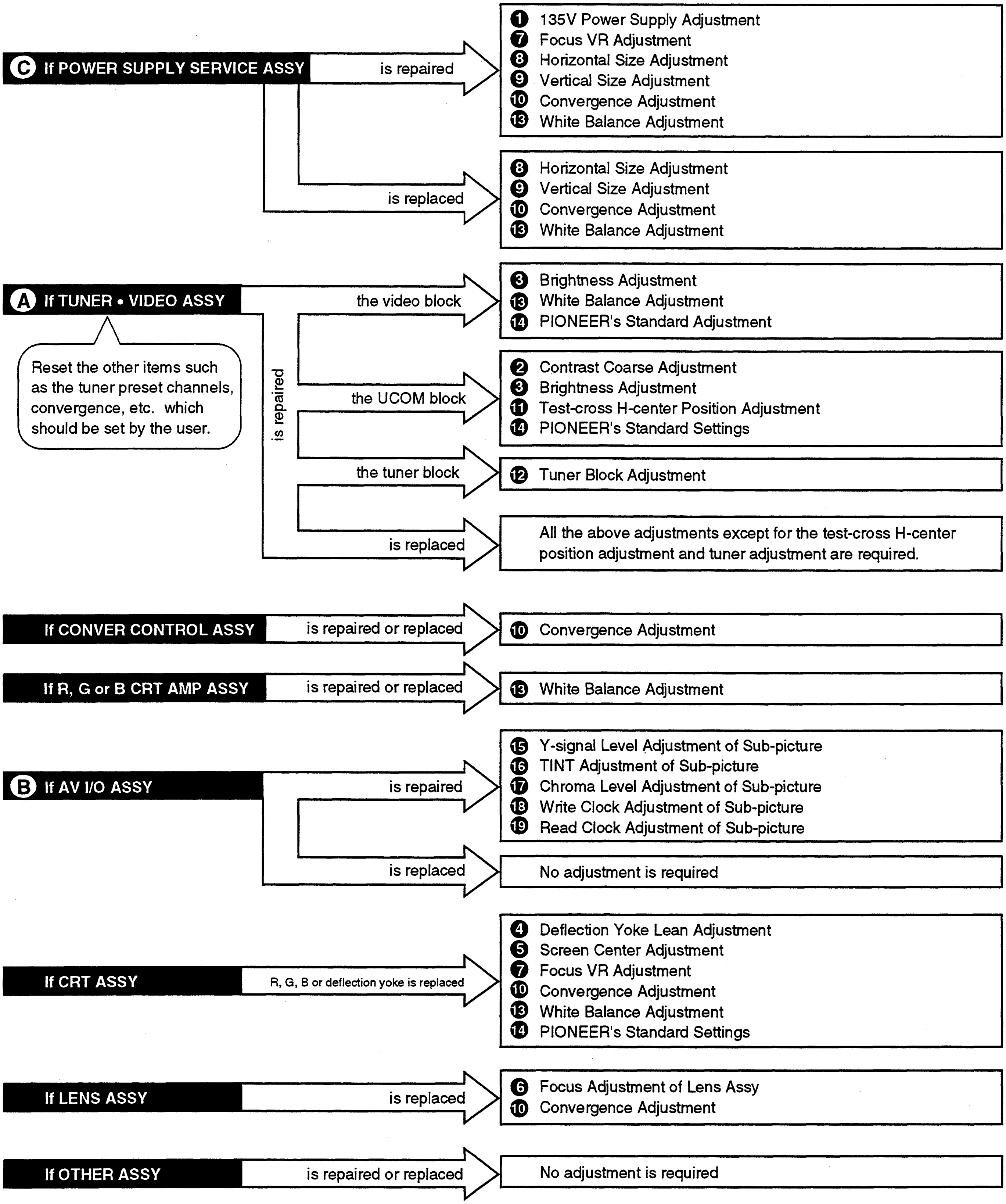
 Remote control unit AXD1429 (CU-SD103)	 Remote control unit for servicing AXD1352 (CU-SD076)	 ⊖ Screwdriver	 ⊖ Adjustment screwdriver
 Color bar generator	 D. DC Voltmeter	 LD Player	 Monoscope
 Dual-trace oscilloscope	 Frequency counter		

■ Assembly Adjustment Location and Items


Deflection yoke
Centering magnet
(Turn in either direction until cross signal becomes white.)
Deflection Yoke (L2)
Deflection Yoke (L1)
HV Distributor
Deflection Yoke (L3)
B.CRT AMP Assy
G.CRT AMP Assy
R.CRT AMP Assy
Translucent paper such as tracing paper
Lens assy (For Green)
Lens assy (For Red)
Lens assy (For Blue)
Focus VR (VR1)
B
G
R
FOCUS VR
Ⓑ
Ⓐ
Ⓒ
Ⓐ TUNER•VIDEO ASSY
J704 MPX
E
B
Q4509
VR4501
TC901
Ⓑ AV I/O ASSY
VR3002
C3070
VR3001
VR3003
F3002
F3001
VR4701
C1609
Ⓒ POWER SUPPLY SERVICE ASSY
D115
VR102

① 135V Power Supply Adjustment
② Contrast Coarse Adjustment
③ Brightness Adjustment (PIONEER's Standard Settings)
④ Deflection Yoke Lean Adjustment
⑤ Screen Center Adjustment
⑥ Focus Adjustment of Lens Assy
⑦ Focus VR Adjustment
⑧ Horizontal Size Adjustment
⑨ Vertical Size Adjustment
⑩ Convergence Adjustment
⑪ Test Cross H-Center Position Adjustment
⑫ Tuner Block Adjustment
⑬ White Balance Adjustment
⑭ PIONEER's Standard Settings
⑮ Y-signal Level Adjustment of Sub-picture (Adjustment for P IN P)
⑯ TINT Adjustment of Sub-picture (Adjustment for P IN P)
⑰ Chroma Level Adjustment of Sub-picture (Adjustment for P IN P)
⑱ Write Clock Adjustment of Sub-picture (Adjustment for P IN P)
⑲ Read Clock Adjustment of Sub-picture (Adjustment for P IN P)

■ Assembly Adjustment Location Guide


Ⓒ If POWER SUPPLY SERVICE ASSY
is repaired
❶ 135V Power Supply Adjustment
❼ Focus VR Adjustment
❽ Horizontal Size Adjustment
❾ Vertical Size Adjustment
❿ Convergence Adjustment
⓭ White Balance Adjustment
is replaced
❽ Horizontal Size Adjustment
❾ Vertical Size Adjustment
❿ Convergence Adjustment
⓭ White Balance Adjustment
Ⓐ If TUNER • VIDEO ASSY
Reset the other items such as the tuner preset channels, convergence, etc. which should be set by the user.
is repaired
the video block
❸ Brightness Adjustment
⓭ White Balance Adjustment
⓮ PIONEER's Standard Adjustment
the UCOM block
❷ Contrast Coarse Adjustment
❸ Brightness Adjustment
⓫ Test-cross H-center Position Adjustment
⓮ PIONEER's Standard Settings
the tuner block
⓬ Tuner Block Adjustment
is replaced
All the above adjustments except for the test-cross H-center position adjustment and tuner adjustment are required.
If CONVER CONTROL ASSY
is repaired or replaced
❿ Convergence Adjustment
If R, G or B CRT AMP ASSY
is repaired or replaced
⓭ White Balance Adjustment
Ⓑ If AV I/O ASSY
is repaired
⓯ Y-signal Level Adjustment of Sub-picture
⓰ TINT Adjustment of Sub-picture
⓱ Chroma Level Adjustment of Sub-picture
⓲ Write Clock Adjustment of Sub-picture
⓳ Read Clock Adjustment of Sub-picture
is replaced
No adjustment is required
If CRT ASSY
R, G, B or deflection yoke is replaced
❹ Deflection Yoke Lean Adjustment
❺ Screen Center Adjustment
❼ Focus VR Adjustment
❿ Convergence Adjustment
⓭ White Balance Adjustment
⓮ PIONEER's Standard Settings
If LENS ASSY
is replaced
❻ Focus Adjustment of Lens Assy
❿ Convergence Adjustment
If OTHER ASSY
is repaired or replaced
No adjustment is required

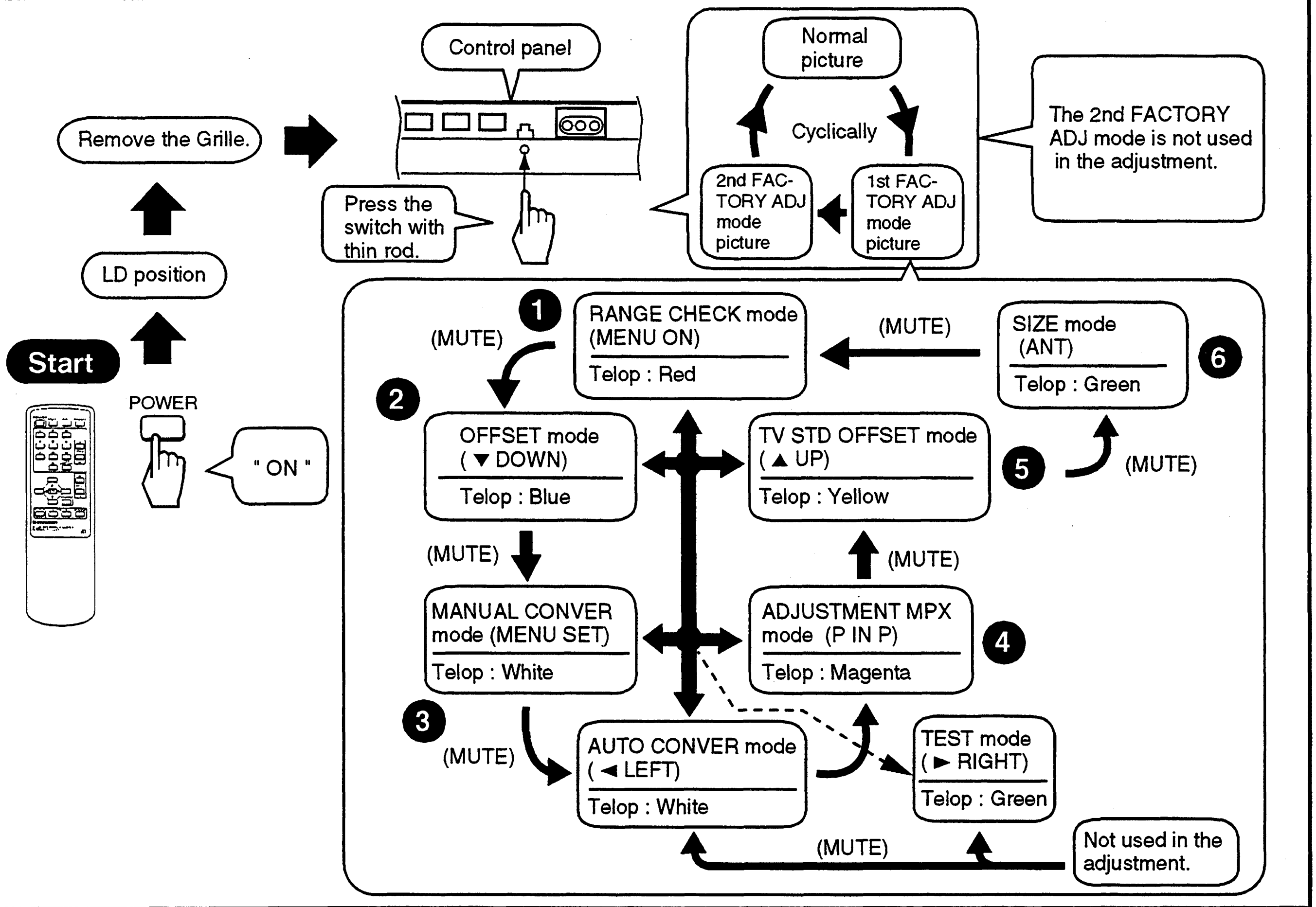
Factory Adjustment Mode

Start .... Start adjusting

1st FAC ...... Select 1st FACTORY ADJ mode, then adjust.

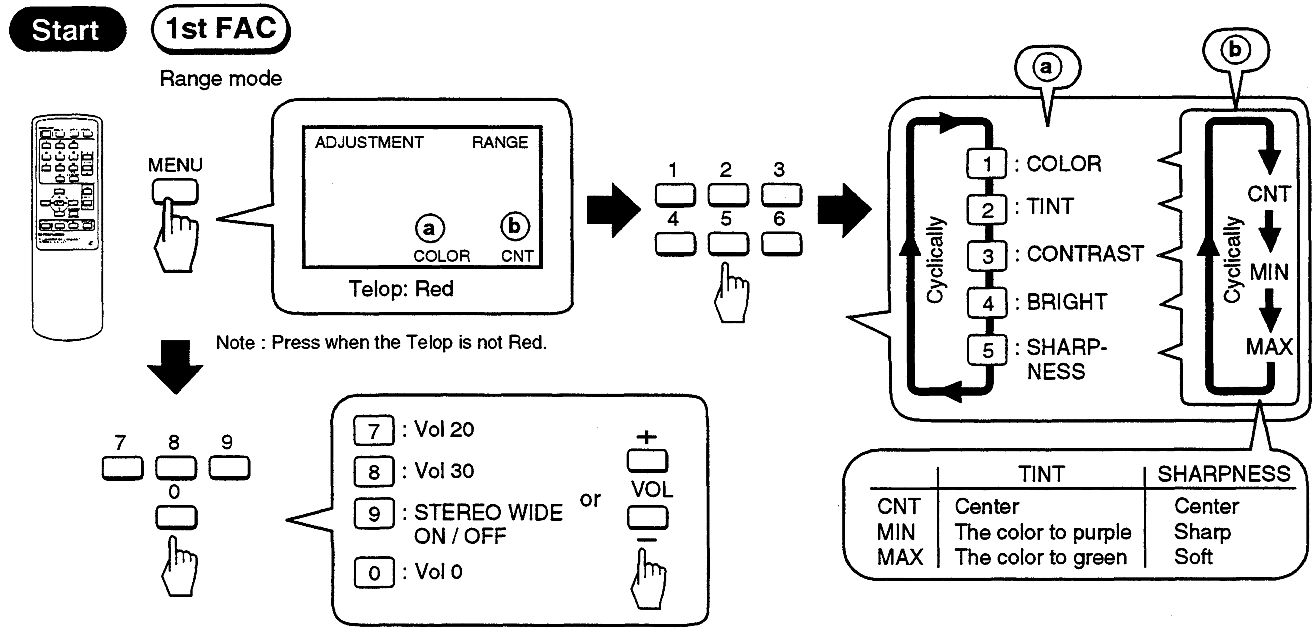
Select 1st FACTORY ADJ Mode

Selecting the mode for adjustment operations.


Control panel
Normal picture
Cyclically
The 2nd FACTORY ADJ mode is not used in the adjustment.
Remove the Grille.
Press the switch with thin rod.
2nd FACTORY ADJ mode picture
1st FACTORY ADJ mode picture
LD position
Start
POWER
" ON "
1
(MUTE)
RANGE CHECK mode (MENU ON)
Telop : Red
(MUTE)
SIZE mode (ANT)
Telop : Green
6
2
OFFSET mode (▼ DOWN)
Telop : Blue
TV STD OFFSET mode (▲ UP)
Telop : Yellow
5
(MUTE)
(MUTE)
(MUTE)
MANUAL CONVER mode (MENU SET)
Telop : White
ADJUSTMENT MPX mode (P IN P)
Telop : Magenta
4
3
(MUTE)
AUTO CONVER mode (◄ LEFT)
Telop : White
TEST mode (► RIGHT)
Telop : Green
(MUTE)
Not used in the adjustment.

① Adjustment Range Mode

Picture quality, etc.. Change amount check made operating.

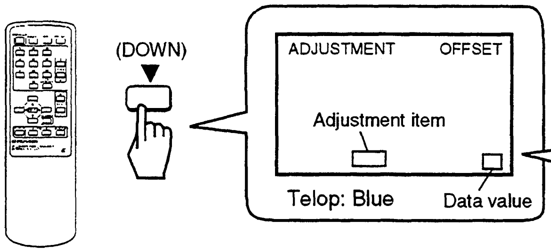

Start
1st FAC
Range mode
MENU
ADJUSTMENT
RANGE
ⓐ
ⓑ
COLOR
CNT
Telop: Red
Note : Press when the Telop is not Red.
1 2 3
4 5 6
ⓐ
ⓑ
Cyclically
1 : COLOR
2 : TINT
3 : CONTRAST
4 : BRIGHT
5 : SHARPNESS
Cyclically
CNT
MIN
MAX
7 8 9
0
7 : Vol 20
8 : Vol 30
9 : STEREO WIDE ON / OFF
0 : Vol 0
or
+
VOL
−

	TINT	SHARPNESS
CNT	Center	Center
MIN	The color to purple	Sharp
MAX	The color to green	Soft

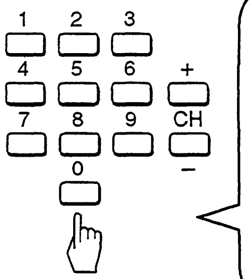
❷ Adjustment OFFSET Mode

This mode is to set the standard picture quality for a normal picture.

Start **1st FAC**

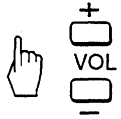

(DOWN)
ADJUSTMENT
OFFSET
Adjustment item
Telop: Blue
Data value

< Adjustment item section >


1
2
3
4
5
6
+
7
8
9
CH
0
–

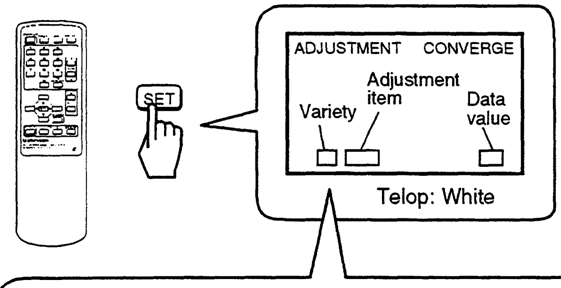
0 : CVTR
1 : COLOR
2 : TINT
3 : CONTR
4 : BRITE
5 : SHARP
8 : DRV-G
9 : DRV-B
CH + : CUT-G
CH – : CUT-B

< Data value section >

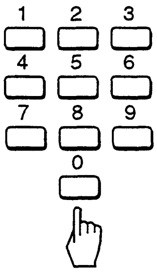


❸ Convergence Setting Mode

Start **1st FAC**

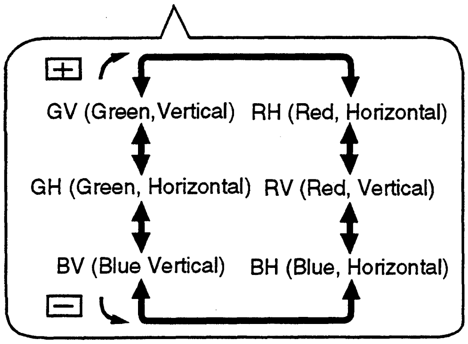

SET
ADJUSTMENT
CONVERGE
Adjustment item
Variety
Data value
Telop: White

< Adjustment item section >


1
2
3
4
5
6
7
8
9
0

< Data value section >

< Variety section >


+
GV (Green, Vertical)
GH (Green, Horizontal)
BV (Blue Vertical)
RH (Red, Horizontal)
RV (Red, Vertical)
BH (Blue, Horizontal)
–

• GH, RH, BH

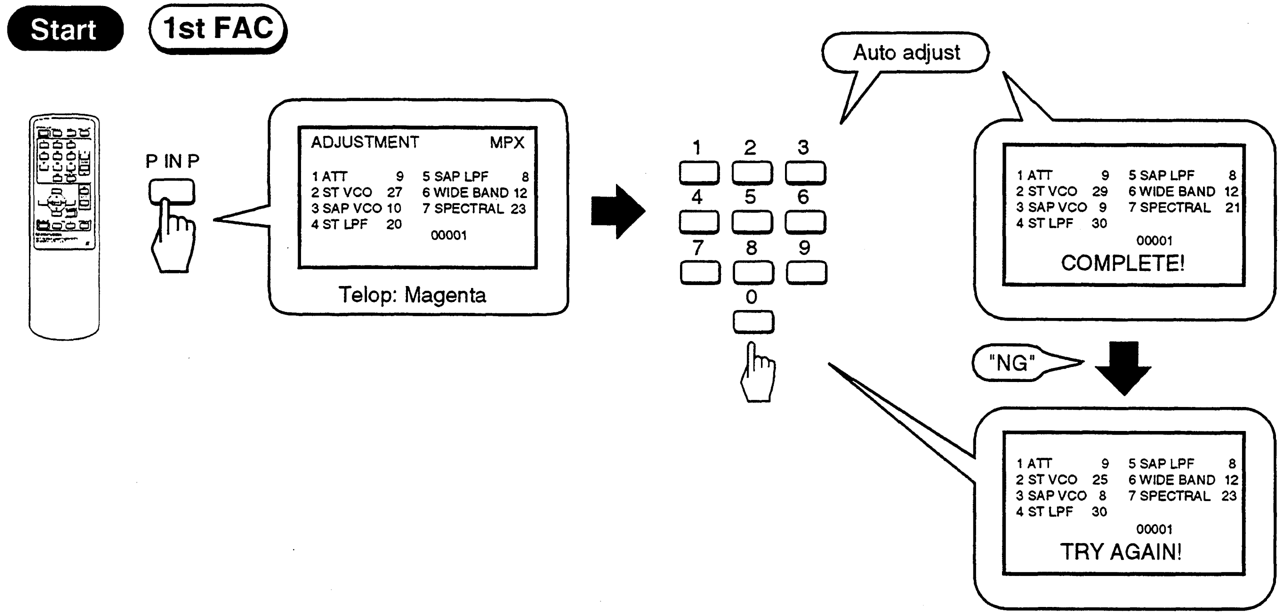
0 : STATIC
1 : SKEW
2 : BOW → 4TH BOW
3 : SUB KEY
4 : KEY
5 : SUB PIN → M S PIN → SUB PIN → 4 S PIN
6 : PIN → MID PIN → 4TH PIN
7 : LIN → 4TH LIN
8 : SIZE
9 : SUB LIN

• GV, RV, BV

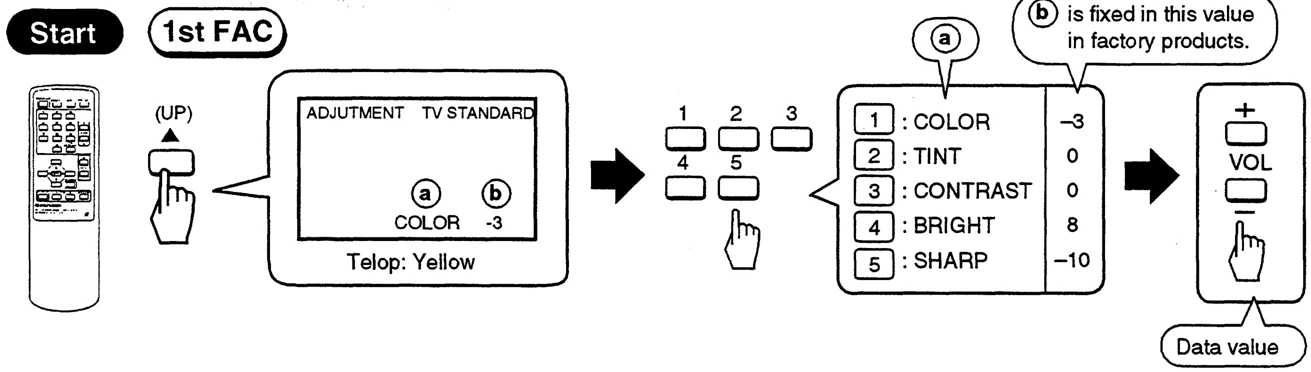
0 : STATIC
1 : SKEW
2 : BOW
3 : SUB KEY
4 : KEY → MID KEY
5 : SUB PIN → S C PIN
6 : PIN → MID PIN → 4TH PIN
7 : LIN
8 : SIZE
9 : SUB LIN

④ Adjustment MPX Mode

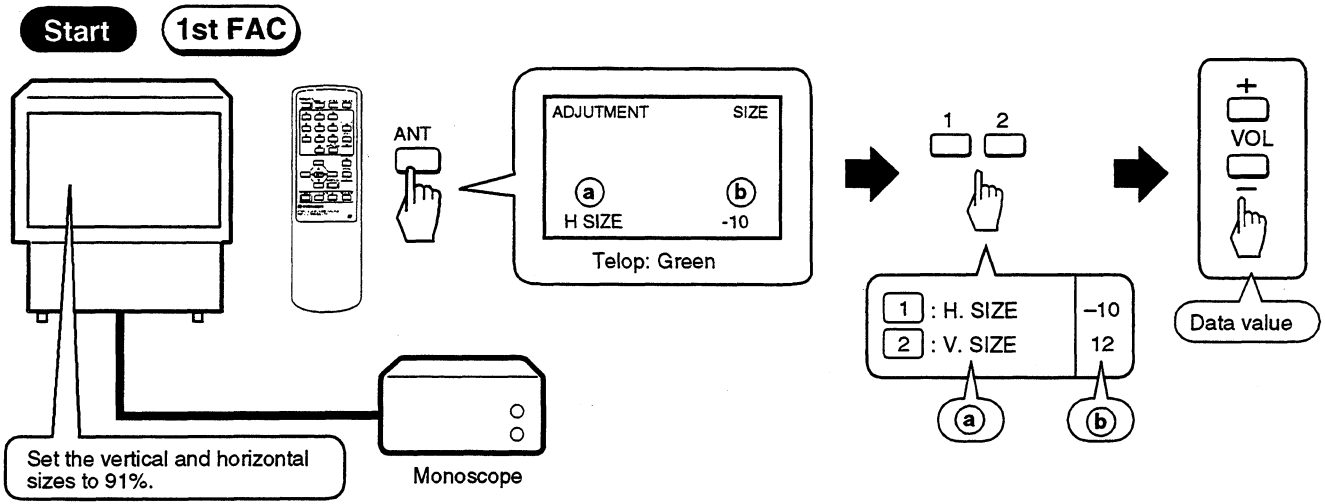
For adjusting the TV tuner MPX decoder section


Start
1st FAC
P IN P
ADJUSTMENT MPX
1 ATT 9
2 ST VCO 27
3 SAP VCO 10
4 ST LPF 20
5 SAP LPF 8
6 WIDE BAND 12
7 SPECTRAL 23
00001
Telop: Magenta
1 2 3
4 5 6
7 8 9
0
Auto adjust
1 ATT 9
2 ST VCO 29
3 SAP VCO 9
4 ST LPF 30
5 SAP LPF 8
6 WIDE BAND 12
7 SPECTRAL 21
00001
COMPLETE!
"NG"
1 ATT 9
2 ST VCO 25
3 SAP VCO 8
4 ST LPF 30
5 SAP LPF 8
6 WIDE BAND 12
7 SPECTRAL 23
00001
TRY AGAIN!

⑤ TV Standard Mode

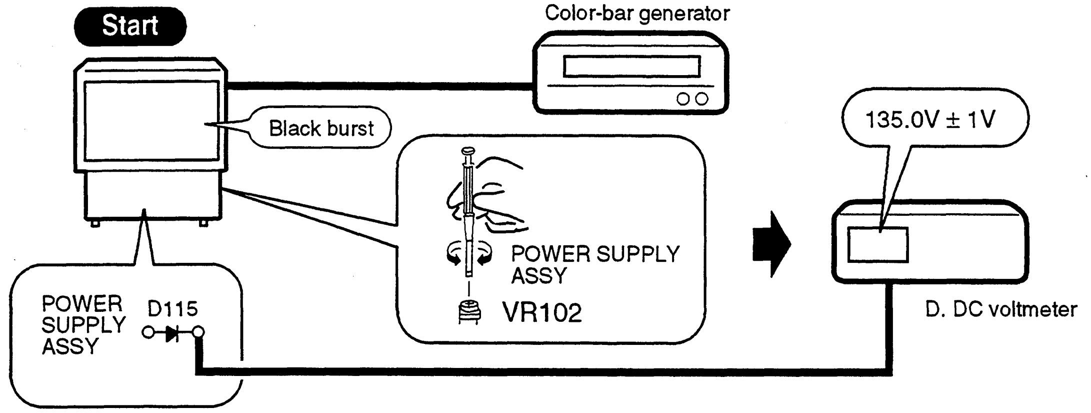

Start
1st FAC
(UP)
▲
ADJUTMENT TV STANDARD
ⓐ ⓑ
COLOR -3
Telop: Yellow
1 2 3
4 5
ⓐ
ⓑ is fixed in this value in factory products.
1 : COLOR –3
2 : TINT 0
3 : CONTRAST 0
4 : BRIGHT 8
5 : SHARP –10
+
VOL
–
Data value

⑥ Adjustment SIZE Mode

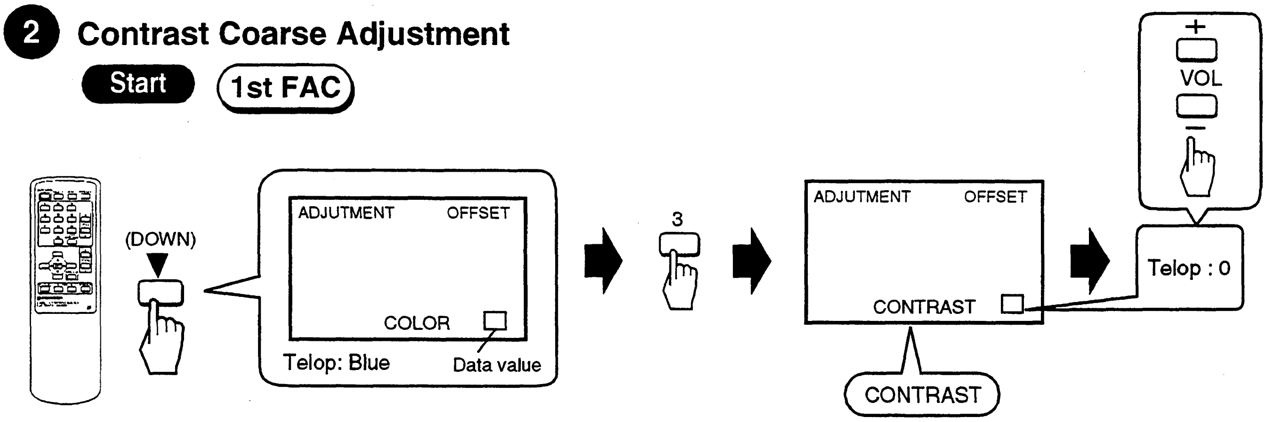

Start
1st FAC
ANT
ADJUTMENT SIZE
ⓐ ⓑ
H SIZE -10
Telop: Green
1 2
1 : H. SIZE –10
2 : V. SIZE 12
ⓐ ⓑ
+
VOL
–
Data value
Set the vertical and horizontal sizes to 91%.
Monoscope

■ Assembly Adjustment

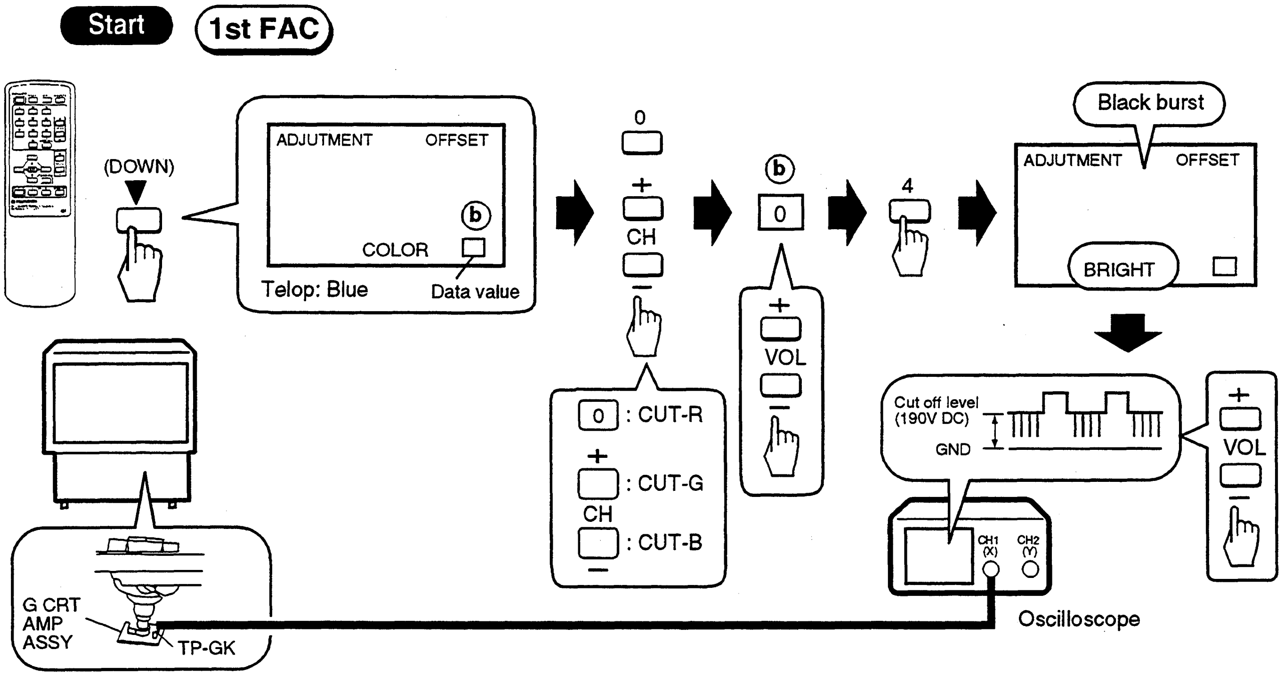
1 135V Power Supply Adjustment


Start
Color-bar generator
Black burst
135.0V ± 1V
POWER SUPPLY ASSY
VR102
D. DC voltmeter
POWER SUPPLY ASSY
D115

2 Contrast Coarse Adjustment

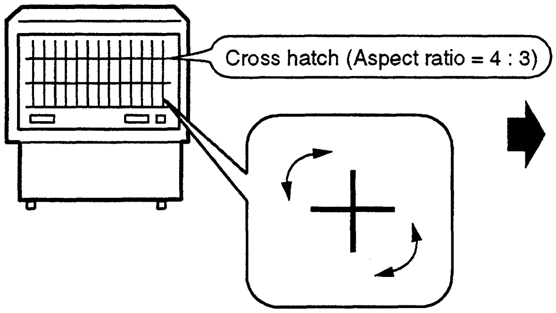

Start
1st FAC
(DOWN)
ADJUTMENT
OFFSET
COLOR
Telop: Blue
Data value
3
ADJUTMENT
OFFSET
CONTRAST
CONTRAST
+
VOL
−
Telop : 0

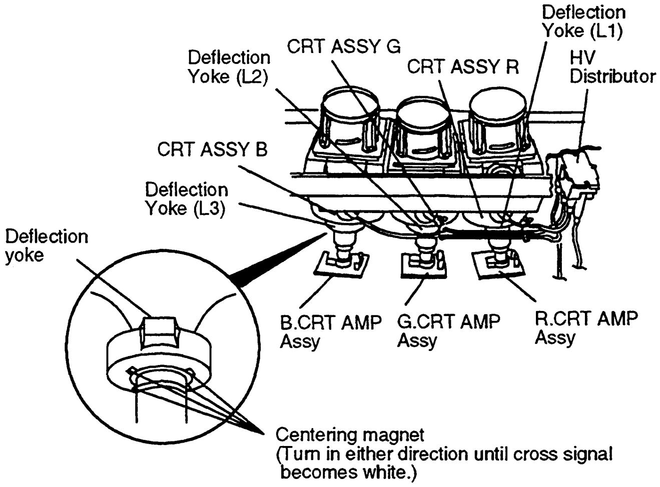
3 Brightness Adjustment (PIONEER's Standard Setting)


Start
1st FAC
(DOWN)
ADJUTMENT
OFFSET
ⓑ
COLOR
Telop: Blue
Data value
0
+
CH
−
0 : CUT-R
+
: CUT-G
CH
: CUT-B
−
ⓑ
0
+
VOL
−
4
Black burst
ADJUTMENT
OFFSET
BRIGHT
Cut off level (190V DC)
GND
CH1 (X)
CH2 (Y)
Oscilloscope
+
VOL
−
G CRT AMP ASSY
TP-GK

④ Deflection Yoke Lean Adjustment

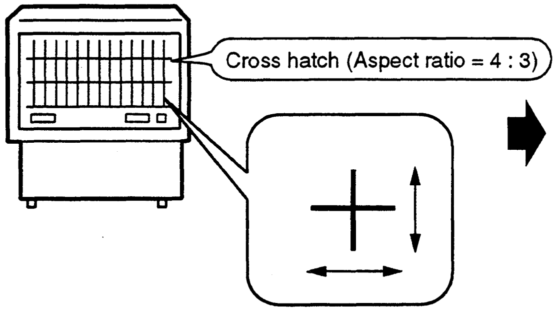
Start


Cross hatch (Aspect ratio = 4 : 3)

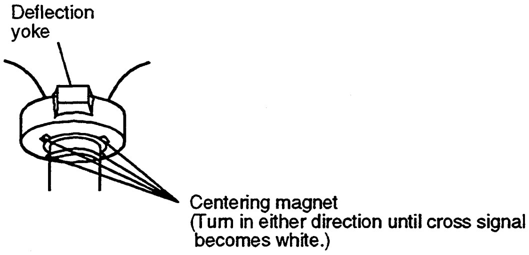

Deflection Yoke (L1)
HV Distributor
CRT ASSY G
CRT ASSY R
Deflection Yoke (L2)
CRT ASSY B
Deflection Yoke (L3)
Deflection yoke
B.CRT AMP Assy
G.CRT AMP Assy
R.CRT AMP Assy
Centering magnet
(Turn in either direction until cross signal becomes white.)

⑤ Screen Center Adjustment

Start

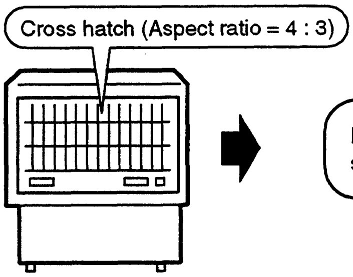

Cross hatch (Aspect ratio = 4 : 3)

- For red or blue adjustment, turn 1st FACTORY ADJ mode ON and then OFF to place the convergence POSITION at the center of the adjustable range.
- Move the centering magnet of the deflection yoke for the replaced color so that the horizontal and vertical lines at the center of the screen align with the lines for a color not replaced.

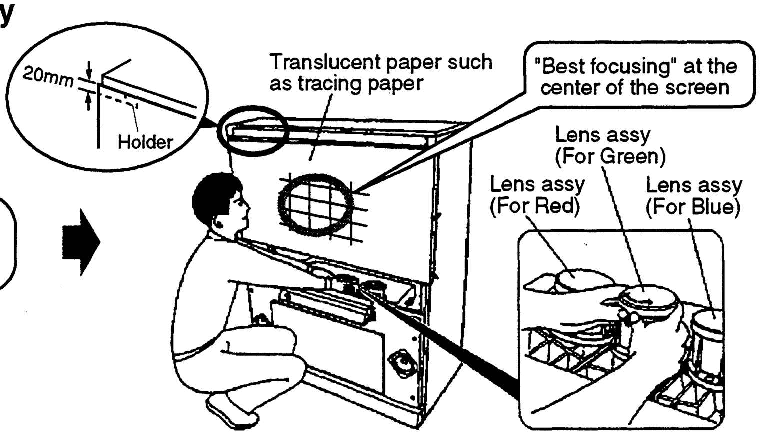

Deflection yoke
Centering magnet
(Turn in either direction until cross signal becomes white.)

⑥ Focus Adjustment of Lens Assy

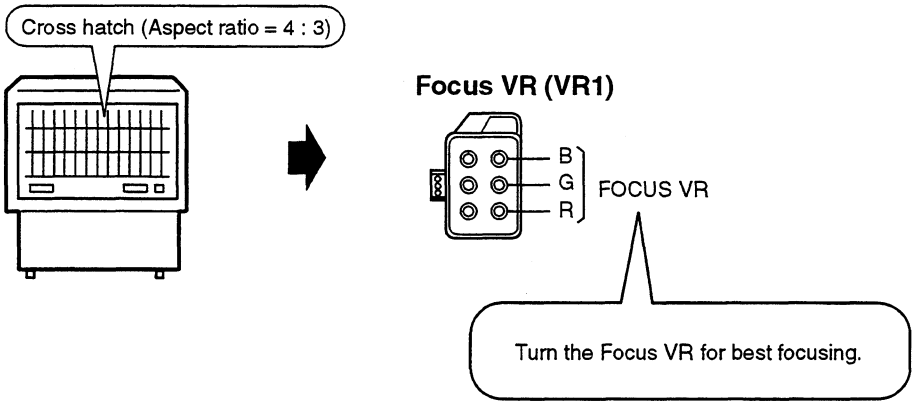
Start


Cross hatch (Aspect ratio = 4 : 3)

Remove the screen frame.

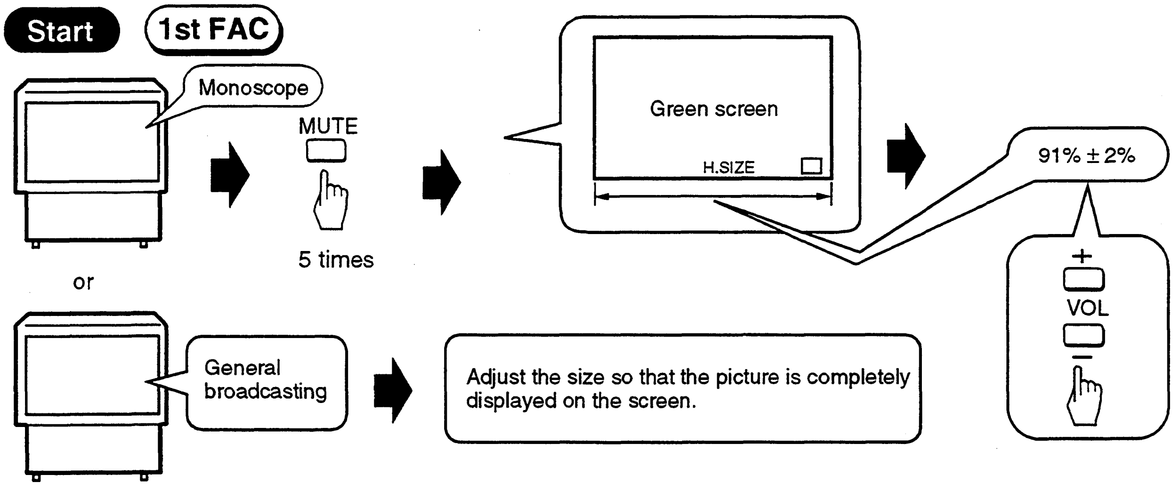

20mm
Holder
Translucent paper such as tracing paper
"Best focusing" at the center of the screen
Lens assy (For Green)
Lens assy (For Red)
Lens assy (For Blue)

7 Focus VR Adjustment


Cross hatch (Aspect ratio = 4 : 3)
Focus VR (VR1)
B
G
R
FOCUS VR

Turn the Focus VR for best focusing.

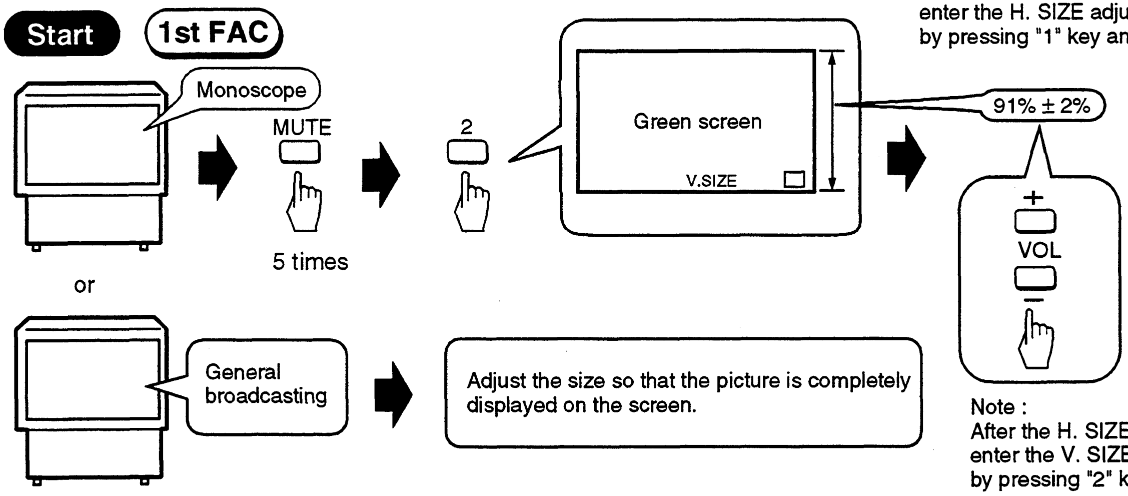
8 Horizontal Size Adjustment


Start
1st FAC
Monoscope
MUTE
5 times
or
General broadcasting
Green screen
H.SIZE
91% ± 2%
+
VOL
−

Adjust the size so that the picture is completely displayed on the screen.

9 Vertical Size Adjustment

Note :
After the V. SIZE adjustment, enter the H. SIZE adjustment by pressing "1" key and readjust.


Start
1st FAC
Monoscope
MUTE
5 times
2
or
General broadcasting
Green screen
V.SIZE
91% ± 2%
+
VOL
−

Adjust the size so that the picture is completely displayed on the screen.

Note :
After the H. SIZE adjustment, enter the V. SIZE adjustment by pressing "2" key.

⑩ Convergence adjustment

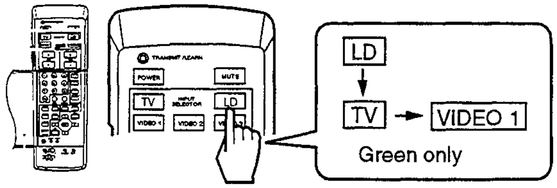
⑩-1 Green line adjustment (1st FAC)

- Adjustment in the horizontal direction

Start

- See ③ Convergence Setting Mode in the Factory Adjustment mode.
- Input cross-hatch signals to this device's video input terminal.

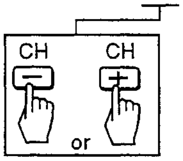
Note :
The convergence for this device must be adjusted for each screen size normal cinema and full cinema.

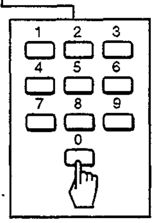

POWER
MUTE
TV
INPUT SELECTOR
LD
VIDEO 1
VIDEO 2

LD
↓
TV → VIDEO 1
Green only

- Use the remote control unit CU-SD076 for servicing.

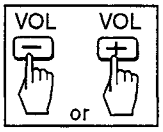
• Select the Adjustment item
GH - STATIC



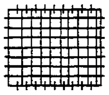
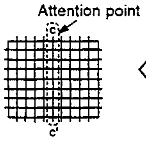
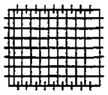
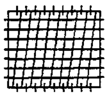
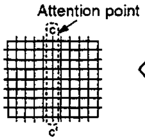
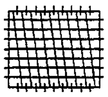
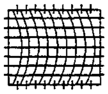
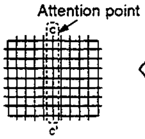
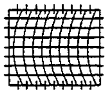
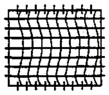
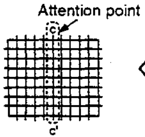
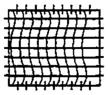
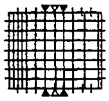
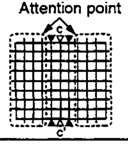
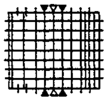
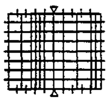
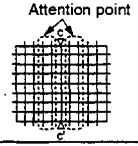
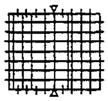
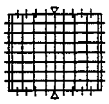
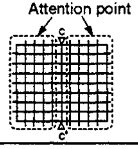
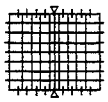
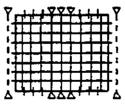
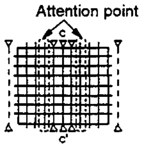
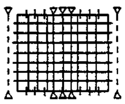

1
2
3
4
5
6
7
8
9
0

In particular, be aware of the setting before adjustment.

• Adjust the Data value



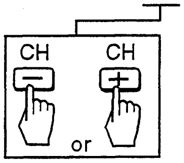
Note :
- Repeat the adjustments until you attain the optimum state.
- Fine-adjust over the entire picture to obtain the optimum picture.
- If the adjustment is not possible within the range of 010 to – 010, set the data value to 0, turn the centering magnet of the deflection yoke and fine-adjust H-STATIC.

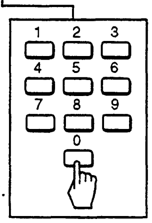
	Adjustment Item	Cross-hatch Picture			Adjustment Point
		Deviated	Optimum	Deviated	
Center-line Adjustment	GH - STATIC		 Attention point c c'		Move the center vertical line at the center of the screen.
	GH - SKEW		 Attention point c c'		Adjust so that the center vertical line is not leaned.
	GH - BOW		 Attention point c c'		Adjust so that the bowed center vertical line at the center of the screen to a straight line.
	GH - 4TH BOW		 Attention point c c'		Adjust so that the wavy center vertical line at the center of the screen to a straight line.
Line-interval Adjustment	GH - LIN		 Attention point c c'		Adjust so that the intervals of the vertical lines in the right and left sections of the screen are symmetrically and correct the size.
	GH - 4TH LIN		 Attention point c c'		
	GH - SIZE		 Attention point c c'		
	GH - SUB LIN		 Attention point c c'		

Note : ▷——◁ : Line which does not move at all c▷——◁c' : Center vertical line ▶——◀ : Line which hardly moves
▷- - - -◁ : Line which does not move out of the screen

• Select the Adjustment item

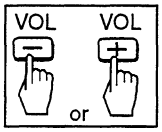
GH - SUB KEY



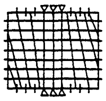
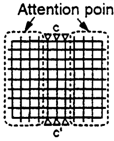
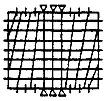
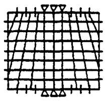
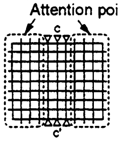
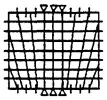
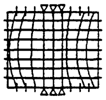
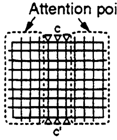
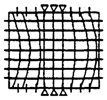
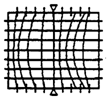
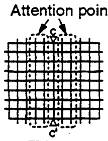
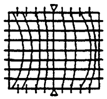
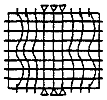
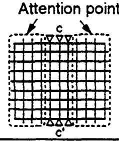
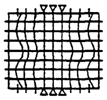
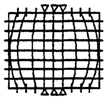
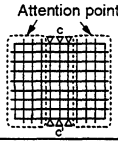
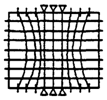
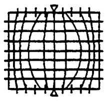
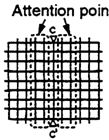
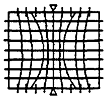
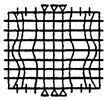
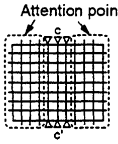
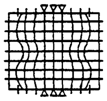

1 2 3
4 5 6
7 8 9
0

In particular, be aware of the setting before adjustment.

• Adjust the Data value



Note :
- Repeat the adjustments until you attain the optimum state.
- Fine-adjust over the entire picture to obtain the optimum picture.
- If the adjustment is not possible within the range of 010 to – 010, set the data value to 0, turn the centering magnet of the deflection yoke and fine-adjust H-STATIC.

Adjustment Item		Cross-hatch Picture			Adjustment Point
		Deviated	Optimum	Deviated	
Lean Adjustment	GH - SUB KEY		 Attention point c c'		Adjust so that the vertical lines in the right and left sections of the screen are not leaned.
	GH - KEY		 Attention point c c'		
Distortion Adjustment	GH - SUB PIN		 Attention point c c'		Adjust so that the vertical lines in the right and left sections of the screen are not distorted and are straight.
	GH - M S PIN		 Attention point c c'		
	GH - 4S PIN		 Attention point c c'		
	GH - PIN		 Attention point c c'		
	GH - MID PIN		 Attention point c c'		
	GH - 4TH PIN		 Attention point c c'		

Note : ▷——◁ : Line which does not move c▷——◁c' : Center vertical line

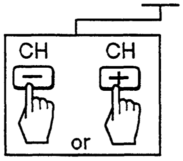
10 -2 Green line adjustment (1st FAC)

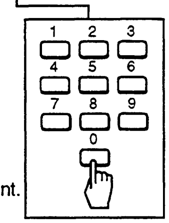
- Adjustment in the vertical direction

Start

- **Select the Adjustment item**

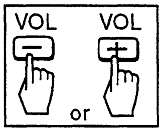
GV - STATIC



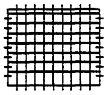
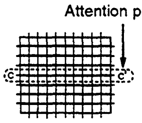
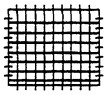
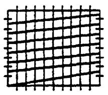
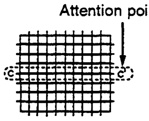
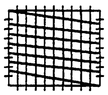
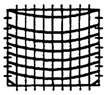
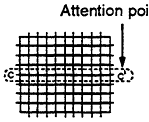
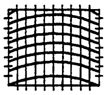
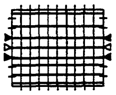
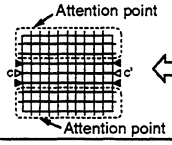
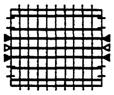
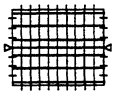
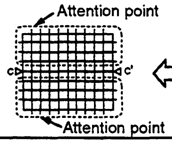
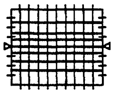
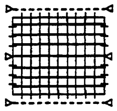
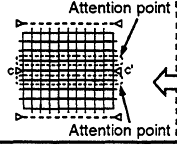
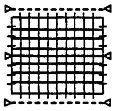

1
2
3
4
5
6
7
8
9
0

In particular, be aware of the setting before adjustment.

- **Adjust the Data value**

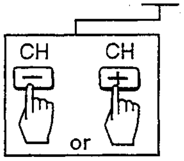


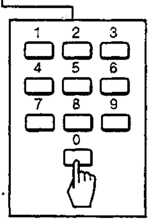
Note :
- Repeat the adjustments until you attain the optimum state.
- Fine-adjust over the entire picture to obtain the optimum picture.
- If the adjustment is not possible within the range of 010 to – 010, set the data value to 0, turn the centering magnet of the deflection yoke and fine-adjust V-STATIC.

Adjustment Item		Cross-hatch Picture			Adjustment Point
		Deviated	Optimum	Deviated	
Center-line Adjustment	GV - STATIC		 Attention point c c'		Move the center horizontal line at the center of the screen.
	GV - SKEW		 Attention point c c'		Adjust so that the center horizontal line is not leaned.
	GV - BOW		 Attention point c c'		Adjust so that the bowed center horizontal line at the center of the screen to a straight line.
Line-interval Adjustment	GV - LIN		 Attention point c c' Attention point		Adjust so that the intervals of the horizontal lines in the upper and lower sections of the screen are symmetrically and correct the size.
	GV - SIZE		 Attention point c c' Attention point		
	GV - SUB LIN		 Attention point c c' Attention point		

Note : ▷——◁ : Line which does not move at all c▷——◁c' : Center horizontal line ▶——◀ : Line which hardly moves
▷- - - -◁ : Line which does not move out of the screen

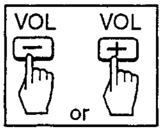
• Select the Adjustment item
GV - SUB KEY



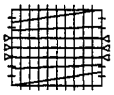
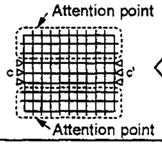
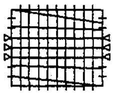
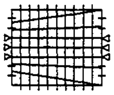
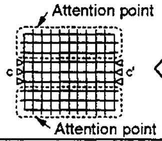
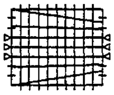
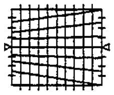
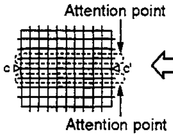
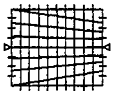
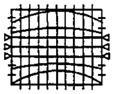
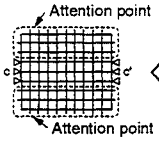
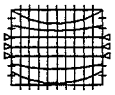
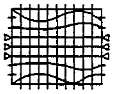
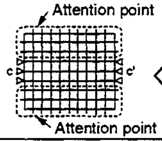
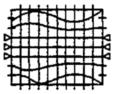
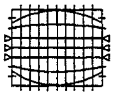
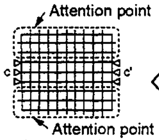
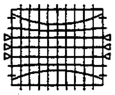
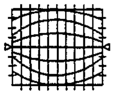
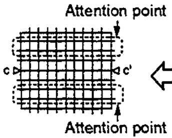
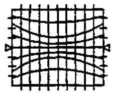
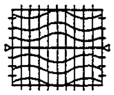
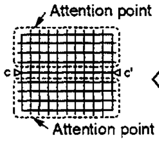
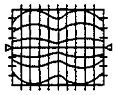

1 2 3
4 5 6
7 8 9
0

In particular, be aware of the setting before adjustment.

• Adjust the Data value



Note :
- Repeat the adjustments until you attain the optimum state.
- Fine-adjust over the entire picture to obtain the optimum picture.
- If the adjustment is not possible within the range of 010 to – 010, set the data value to 0, turn the centering magnet of the deflection yoke and fine-adjust V-STATIC.

Adjustment Item		Cross-hatch Picture			Adjustment Point
		Deviated	Optimum	Deviated	
Lean Adjustment	GV - SUB KEY		 Attention point c c' Attention point		Adjust so that the horizontal lines in the upper and lower sections of the screen are not leaned.
	GV - KEY		 Attention point c c' Attention point		
	GV - MID KEY		 Attention point c c' Attention point		
Distortion Adjustment	GV - SUB PIN		 Attention point c c' Attention point		Adjust so that the horizontal lines in the upper and lower sections of the screen are not distorted and are straight.
	GV - SC PIN		 Attention point c c' Attention point		
	GV - PIN		 Attention point c c' Attention point		
	GV - MID PIN		 Attention point c c' Attention point		
	GV - 4TH PIN		 Attention point c c' Attention point		

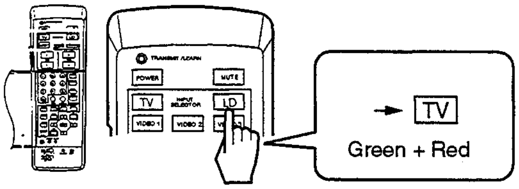
Note : ▷——◁ : Line which does not move c▷——◁c' : Center vertical line

⑩-3 Red line adjustment (1st FAC)

- Adjustment in the horizontal direction

Start

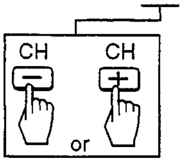
- See ③ Convergence Setting Mode in the Factory Adjustment mode.
- Input cross-hatch signals to this device's video input terminal.

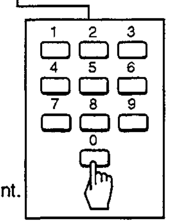

POWER
MUTE
TV
INPUT SELECTOR
LD
VIDEO 1
VIDEO 2
→ TV
Green + Red

- Use the remote control unit CU-SD076 for servicing.

• Select the Adjustment item

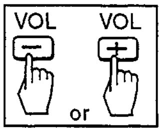
RH - STATIC



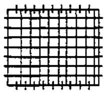
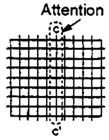
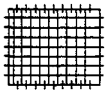
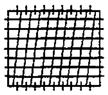
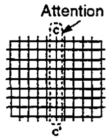
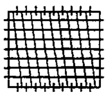
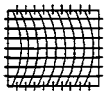
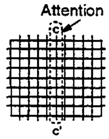
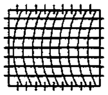
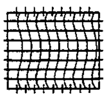
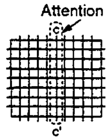
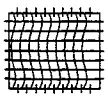
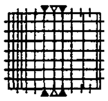
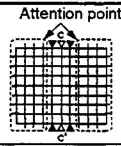
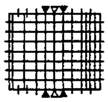
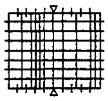
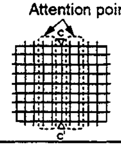
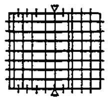
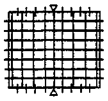
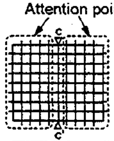
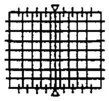
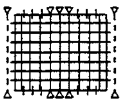
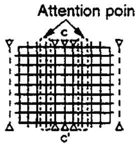
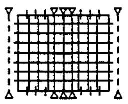

1
2
3
4
5
6
7
8
9
0

In particular, be aware of the setting before adjustment.

• Adjust the Data value



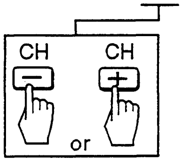
Note :
- Repeat the adjustments until you attain the optimum state.
- Fine-adjust over the entire picture to obtain the optimum picture.
- If the adjustment is not possible within the range of 010 to – 010, set the data value to 0, turn the centering magnet of the deflection yoke and fine-adjust H-STATIC.

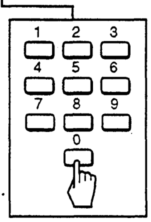
Adjustment Item		Cross-hatch Picture			Adjustment Point
		Deviated	Optimum	Deviated	
Center-line Adjustment	RH - STATIC		 Attention point c c'		Converge the center vertical line in the green vertical line.
	RH - SKEW		 Attention point c c'		Adjust so that the center vertical line is not leaned.
	RH - BOW		 Attention point c c'		Adjust so that the bowed center vertical line at the center of the screen to a straight line.
	RH - 4TH BOW		 Attention point c c'		Adjust so that the wavy center vertical line at the center of the screen to a straight line.
Line-interval Adjustment	RH - LIN		 Attention point c c'		Adjust so that the intervals of the vertical lines in the right and left sections of the screen are symmetrically and converge them in the green vertical lines.
	RH - 4TH LIN		 Attention point c c'		
	RH - SIZE		 Attention point c c'		
	RH - SUB LIN		 Attention point c c'		

Note : ▷——◁ : Line which does not move at all c▷——◁c' : Center vertical line ▶——◀ : Line which hardly moves
▷- - - - -◁ : Line which does not move out of the screen

• Select the Adjustment item

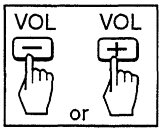
RH - SUB KEY



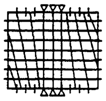
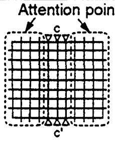
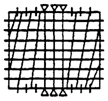
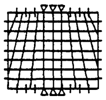
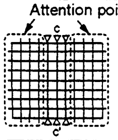
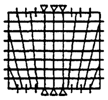
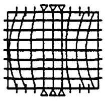
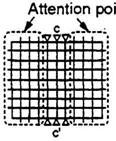
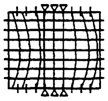
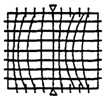
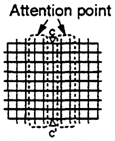
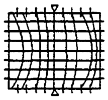
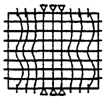
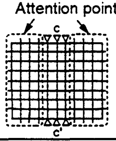
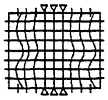
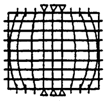
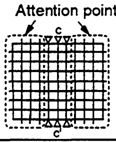
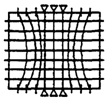
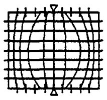
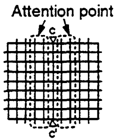
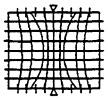
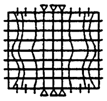
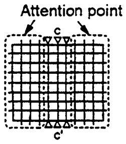
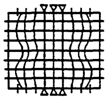

1
2
3
4
5
6
7
8
9
0

In particular, be aware of the setting before adjustment.

• Adjust the Data value



Note :
- Repeat the adjustments until you attain the optimum state.
- Fine-adjust over the entire picture to obtain the optimum picture.
- If the adjustment is not possible within the range of 010 to – 010, set the data value to 0, turn the centering magnet of the deflection yoke and fine-adjust H-STATIC.

Adjustment Item		Cross-hatch Picture			Adjustment Point
		Deviated	Optimum	Deviated	
Lean Adjustment	**RH - SUB KEY**	 ⇔	 Attention point c c'	⇔ 	Adjust so that the vertical lines in the right and left sections of the screen are not leaned.
	RH - KEY	 ⇔	 Attention point c c'	⇔ 	
Distortion Adjustment	**RH - SUB PIN**	 ⇔	 Attention point c c'	⇔ 	Adjust so that the vertical lines in the right and left sections of the screen are not distorted and are straight.
	RH - M S PIN	 ⇔	 Attention point c c'	⇔ 	
	RH - 4S PIN	 ⇔	 Attention point c c'	⇔ 	
	RH - PIN	 ⇔	 Attention point c c'	⇔ 	
	RH - MID PIN	 ⇔	 Attention point c c'	⇔ 	
	RH - 4TH PIN	 ⇔	 Attention point c c'	⇔ 	

Note : ▷——◁ : Line which does not move c▷——◁c' : Center vertical line

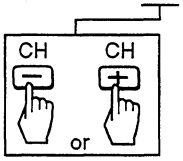
⑩-4 Red line adjustment (1st FAC)

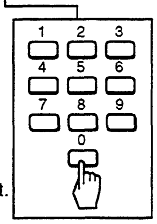
- Adjustment in the vertical direction

Start

- **Select the Adjustment item**

RV - STATIC

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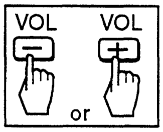
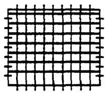
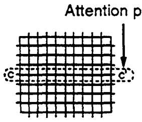
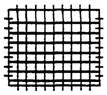
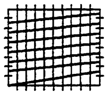
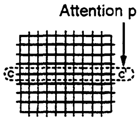
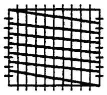
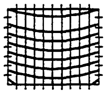
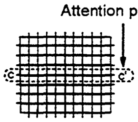
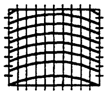
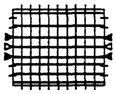
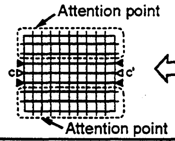
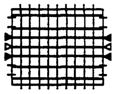
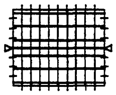
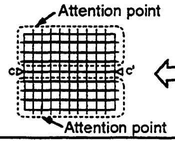
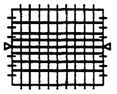
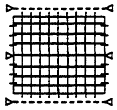
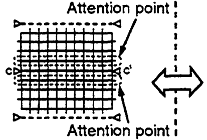
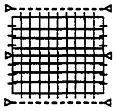
In particular, be aware of the setting before adjustment.

- **Adjust the Data value**



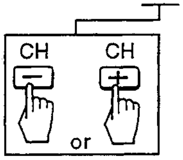
Note :
- Repeat the adjustments until you attain the optimum state.
- Fine-adjust over the entire picture to obtain the optimum picture.
- If the adjustment is not possible within the range of 010 to – 010, set the data value to 0, turn the centering magnet of the deflection yoke and fine-adjust V-STATIC.

	Adjustment Item	Cross-hatch Picture			Adjustment Point
		Deviated	Optimum	Deviated	
Center-line Adjustment	RV - STATIC		 Attention point c c'		Converge the center horizontal line in the green horizontal line.
	RV - SKEW		 Attention point c c'		Adjust so that the center horizontal line is not leaned.
	RV - BOW		 Attention point c c'		Adjust so that the bowed center horizontal line at the center of the screen to a straight line.
Line-interval Adjustment	RV - LIN		 Attention point c c' Attention point		Adjust so that the intervals of the horizontal lines in the upper and lower sections of the screen are symmetrically and converge them in the green horizontal lines.
	RV - SIZE		 Attention point c c' Attention point		
	RV - SUB LIN		 Attention point c c' Attention point		

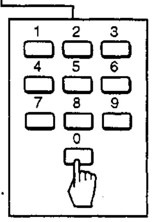
Note : ▷——◁ : Line which does not move at all c▷——◁c' : Center horizontal line ▶——◀ : Line which hardly moves
▷- - - -◁ : Line which does not move out of the screen

- **Select the Adjustment item**

RV - SUB KEY



In particular, be aware of the setting before adjustment.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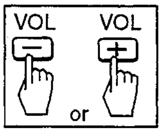
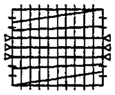
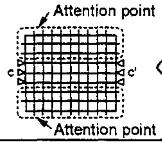
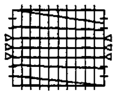
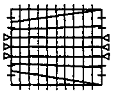
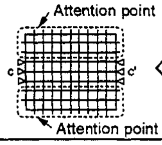
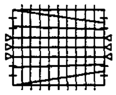
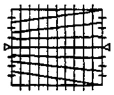
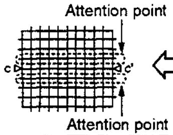
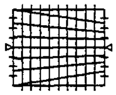
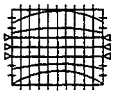
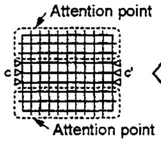
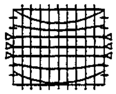
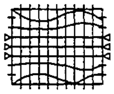
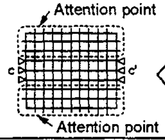
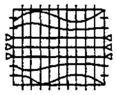
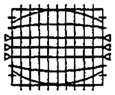
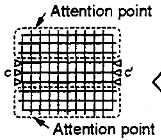
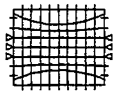
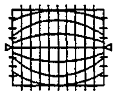
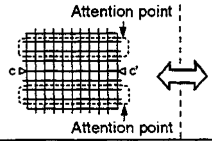
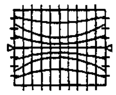
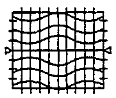
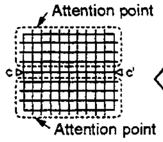
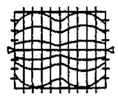
- **Adjust the Data value**



Note :
- Repeat the adjustments until you attain the optimum state.
- Fine-adjust over the entire picture to obtain the optimum picture.
- If the adjustment is not possible within the range of 010 to – 010, set the data value to 0, turn the centering magnet of the deflection yoke and fine-adjust V-STATIC.

Adjustment Item		Cross-hatch Picture			Adjustment Point
		Deviated	Optimum	Deviated	
Lean Adjustment	**RV - SUB KEY**		 Attention point c c' Attention point		Adjust so that the horizontal lines in the upper and lower sections of the screen are not leaned.
	RV - KEY		 Attention point c c' Attention point		
	RV - MID KEY		 Attention point c c' Attention point		
Distortion Adjustment	**RV - SUB PIN**		 Attention point c c' Attention point		Adjust so that the horizontal lines in the upper and lower sections of the screen are not distorted and are straight.
	RV - SC PIN		 Attention point c c' Attention point		
	RV - PIN		 Attention point c c' Attention point		
	RV - MID PIN		 Attention point c c' Attention point		
	RV - 4TH PIN		 Attention point c c' Attention point		

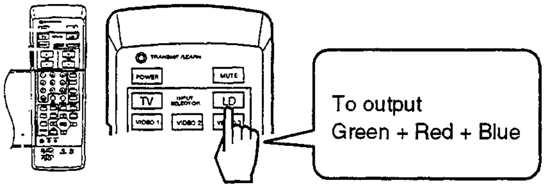
Note : ▷——◁ : Line which does not move　　c▷——◁c' : Center vertical line

⑩-5 Blue line adjustment (1st FAC)

- Adjustment in the horizontal direction

Start

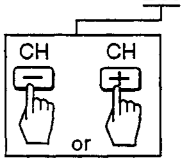
- See ③ Convergence Setting Mode in the Factory Adjustment mode.
- Input cross-hatch signals to this device's video input terminal.

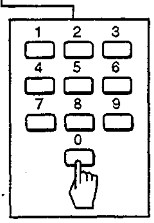

POWER
MUTE
TV
LD
VIDEO 1
VIDEO 2
To output
Green + Red + Blue

- Use the remote control unit CU-SD076 for servicing.

• Select the Adjustment item

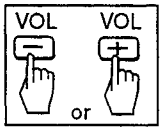
BH - STATIC



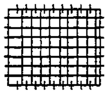
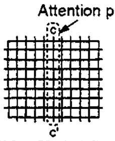
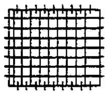
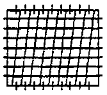
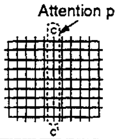
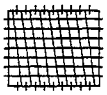
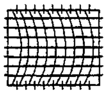
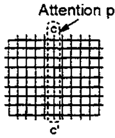
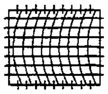
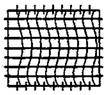
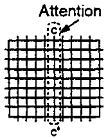
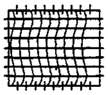
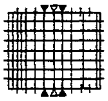
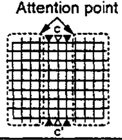
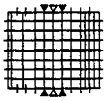
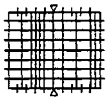
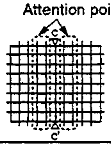
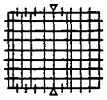
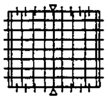
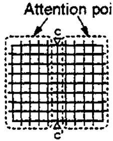
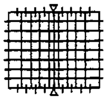
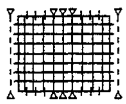
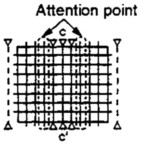
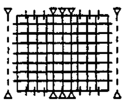

1
2
3
4
5
6
7
8
9
0

In particular, be aware of the setting before adjustment.

• Adjust the Data value



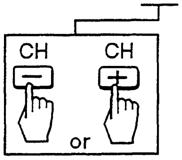
Note :
- Repeat the adjustments until you attain the optimum state.
- Fine-adjust over the entire picture to obtain the optimum picture.
- If the adjustment is not possible within the range of 010 to – 010, set the data value to 0, turn the centering magnet of the deflection yoke and fine-adjust H-STATIC.

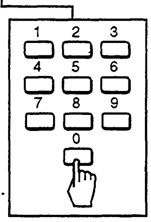
Adjustment Item		Cross-hatch Picture			Adjustment Point
		Deviated	Optimum	Deviated	
Center-line Adjustment	BH - STATIC		 Attention point c c'		Converge the center vertical line in the green vertical line.
	BH - SKEW		 Attention point c c'		Adjust so that the center vertical line is not leaned.
	BH - BOW		 Attention point c c'		Adjust so that the bowed center vertical line at the center of the screen to a straight line.
	BH - 4TH BOW		 Attention point c c'		Adjust so that the wavy center vertical line at the center of the screen to a straight line.
Line-interval Adjustment	BH - LIN		 Attention point c c'		Adjust so that the intervals of the vertical lines in the right and left sections of the screen are symmetrically and converge them in the green vertical lines.
	BH - 4TH LIN		 Attention point c c'		
	BH - SIZE		 Attention point c c'		
	BH - SUB LIN		 Attention point c c'		

Note : ▷——◁ : Line which does not move at all c▷——◁c' : Center vertical line ▶——◀ : Line which hardly moves
▷- - - -◁ : Line which does not move out of the screen

• Select the Adjustment item

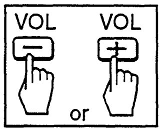
BH - SUB KEY



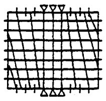
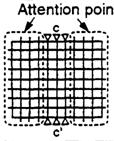
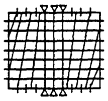
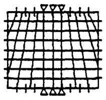
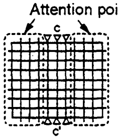
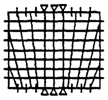
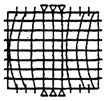
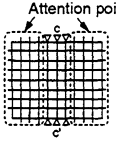
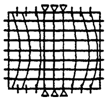
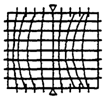
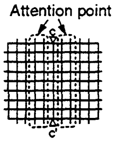
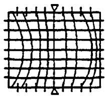
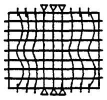
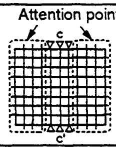
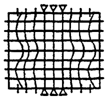
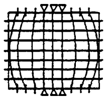
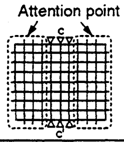
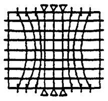
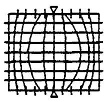
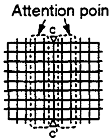
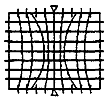
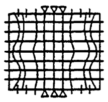
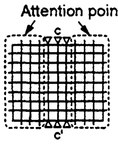
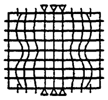

1
2
3
4
5
6
7
8
9
0

In particular, be aware of the setting before adjustment.

• Adjust the Data value



Note :
- Repeat the adjustments until you attain the optimum state.
- Fine-adjust over the entire picture to obtain the optimum picture.
- If the adjustment is not possible within the range of 010 to – 010, set the data value to 0, turn the centering magnet of the deflection yoke and fine-adjust H-STATIC.

Adjustment Item		**Cross-hatch Picture**			**Adjustment Point**
		Deviated	**Optimum**	**Deviated**	
Lean Adjustment	**BH - SUB KEY**		 Attention point c c'		Adjust so that the vertical lines in the right and left sections of the screen are not leaned.
	BH - KEY		 Attention point c c'		
Distortion Adjustment	**BH - SUB PIN**		 Attention point c c'		Adjust so that the vertical lines in the right and left sections of the screen are not distorted and are straight.
	BH - M S PIN		 Attention point c c'		
	BH - 4S PIN		 Attention point c c'		
	BH - PIN		 Attention point c c'		
	BH - MID PIN		 Attention point c c'		
	BH - 4TH PIN		 Attention point c c'		

Note : ▷——◁ : Line which does not move c▷——◁c' : Center vertical line

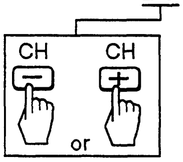
⑩-6 Blue line adjustment (1st FAC)

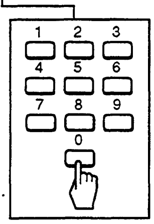
- Adjustment in the vertical direction

Start

• Select the Adjustment item

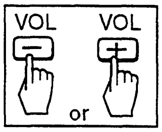
BV - STATIC



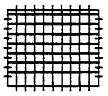
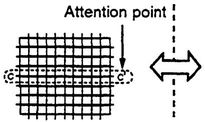
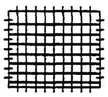
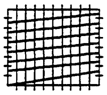
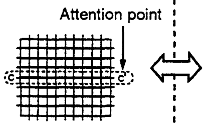
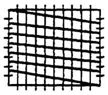
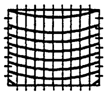
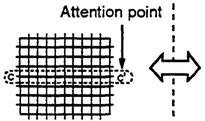
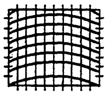
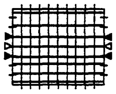
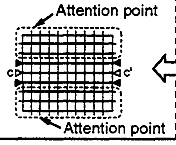
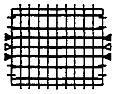
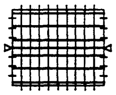
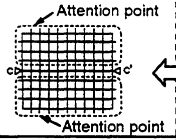
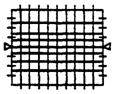
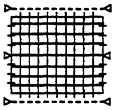
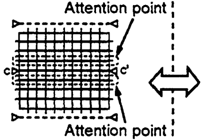
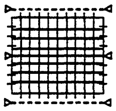

1
2
3
4
5
6
7
8
9
0

In particular, be aware of the setting before adjustment.

• Adjust the Data value



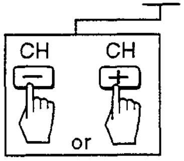
Note :
- Repeat the adjustments until you attain the optimum state.
- Fine-adjust over the entire picture to obtain the optimum picture.
- If the adjustment is not possible within the range of 010 to – 010, set the data value to 0, turn the centering magnet of the deflection yoke and fine-adjust V-STATIC.

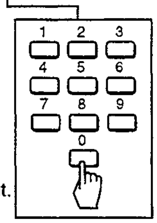
Adjustment Item		Cross-hatch Picture			Adjustment Point
		Deviated	Optimum	Deviated	
Center-line Adjustment	BV - STATIC		 Attention point c c'		Converge the center horizontal line in the green horizontal line.
	BV - SKEW		 Attention point c c'		Adjust so that the center horizontal line is not leaned.
	BV - BOW		 Attention point c c'		Adjust so that the bowed center horizontal line at the center of the screen to a straight line.
Line-interval Adjustment	BV - LIN		 Attention point c c' Attention point		Adjust so that the intervals of the horizontal lines in the upper and lower sections of the screen are symmetrically and converge them in the green horizontal lines.
	BV - SIZE		 Attention point c c' Attention point		
	BV - SUB LIN		 Attention point c c' Attention point		

Note : ▷——◁ : Line which does not move at all   c▷——◁c' : Center horizontal line   ▶——◀ : Line which hardly moves
▷- - - -◁ : Line which does not move out of the screen

• Select the Adjustment item

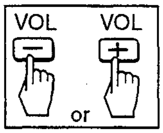
BV - SUB KEY



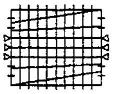
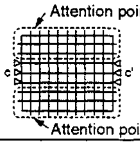
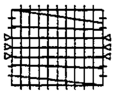
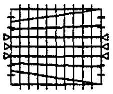
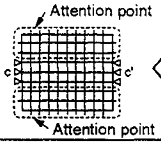
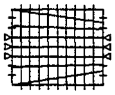
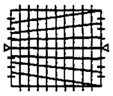
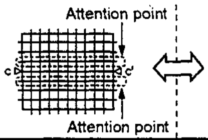
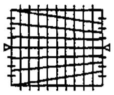
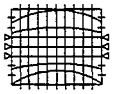
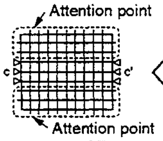
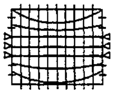
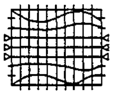
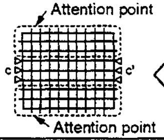
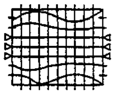
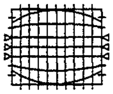
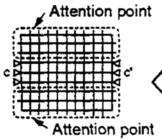
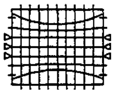
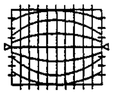
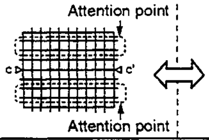
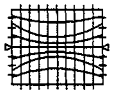
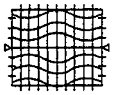
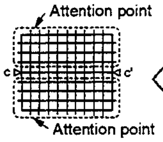
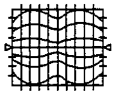

1
2
3
4
5
6
7
8
9
0

In particular, be aware of the setting before adjustment.

• Adjust the Data value

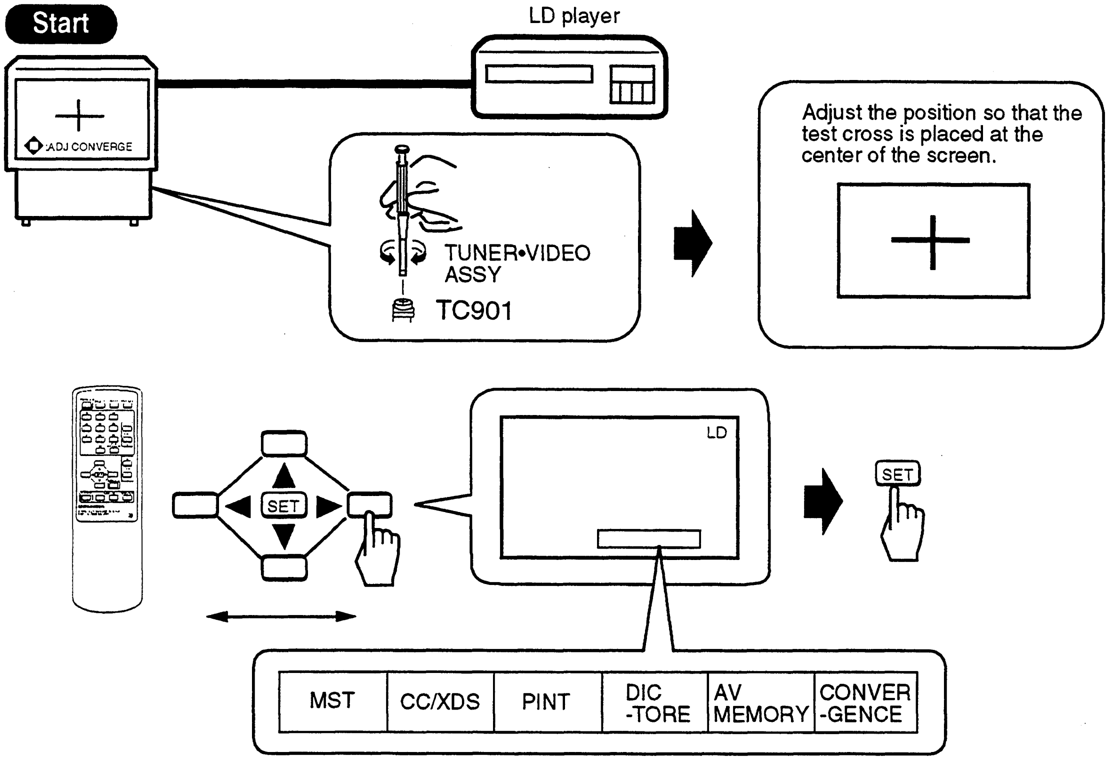


Note :
- Repeat the adjustments until you attain the optimum state.
- Fine-adjust over the entire picture to obtain the optimum picture.
- If the adjustment is not possible within the range of 010 to – 010, set the data value to 0, turn the centering magnet of the deflection yoke and fine-adjust V-STATIC.

Adjustment Item		Cross-hatch Picture			Adjustment Point
		Deviated	Optimum	Deviated	
Lean Adjustment	**BV - SUB KEY**		 Attention point c c' Attention point		Adjust so that the horizontal lines in the upper and lower sections of the screen are not leaned.
	BV - KEY		 Attention point c c' Attention point		
	BV - MID KEY		 Attention point c c' Attention point		
Distortion Adjustment	**BV - SUB PIN**		 Attention point c c' Attention point		Adjust so that the horizontal lines in the upper and lower sections of the screen are not distorted and are straight.
	BV - SC PIN		 Attention point c c' Attention point		
	BV - PIN		 Attention point c c' Attention point		
	BV - MID PIN		 Attention point c c' Attention point		
	BV - 4TH PIN		 Attention point c c' Attention point		

Note : ▷——◁ : Line which does not move   c▷——◁c' : Center vertical line

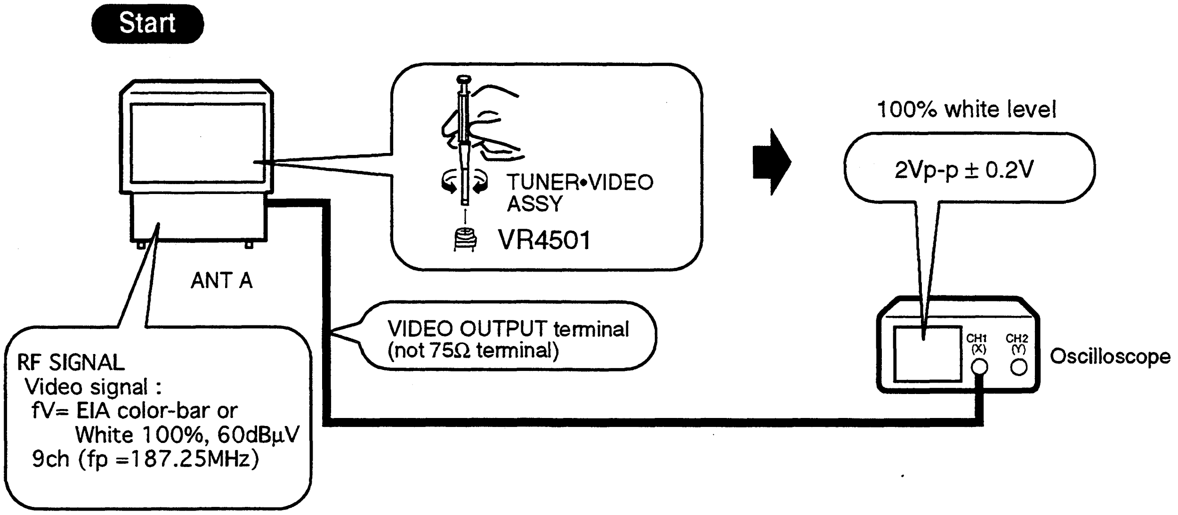
⑪ Test Cross H-center Position Adjustment


Start
LD player
:ADJ CONVERGE
TUNER•VIDEO ASSY
TC901
LD
SET
SET
MST
CC/XDS
PINT
DIC -TORE
AV MEMORY
CONVER -GENCE

Adjust the position so that the test cross is placed at the center of the screen.

⑫ Tuner Block Adjustment

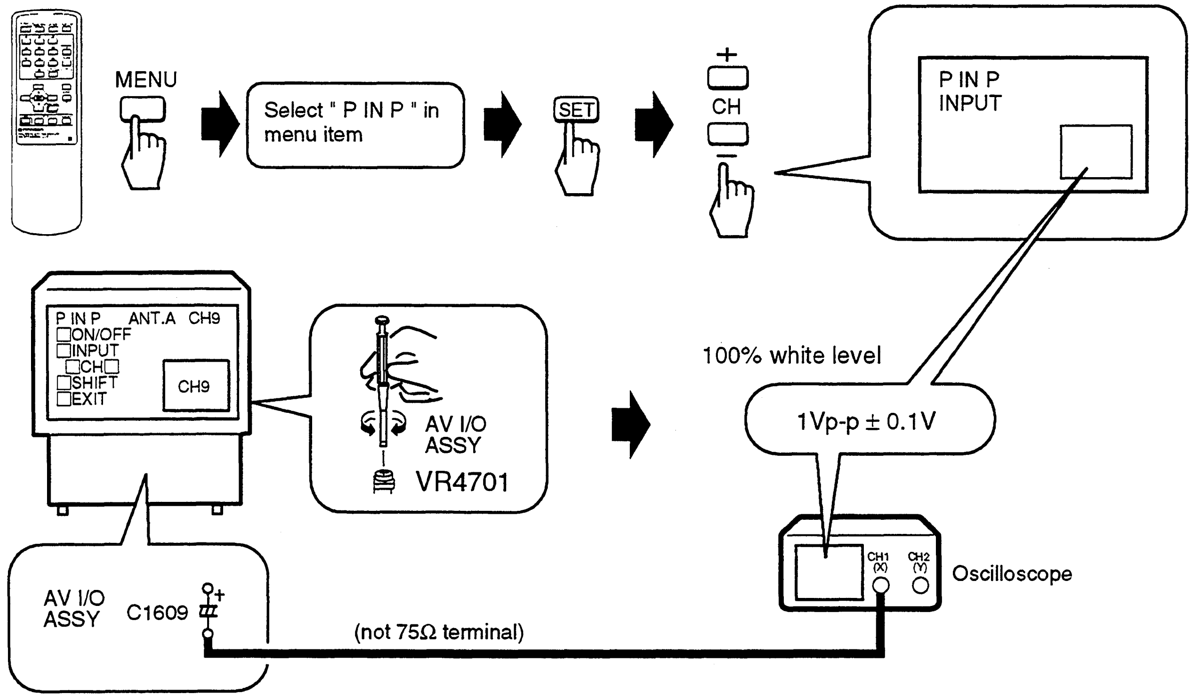
⑫-1 Video Level Adjustment ①


Start
TUNER•VIDEO ASSY
VR4501
100% white level
2Vp-p ± 0.2V
ANT A
VIDEO OUTPUT terminal (not 75Ω terminal)
CH1 (X)
CH2 (Y)
Oscilloscope

RF SIGNAL
Video signal :
fV= EIA color-bar or White 100%, 60dBμV
9ch (fp =187.25MHz)

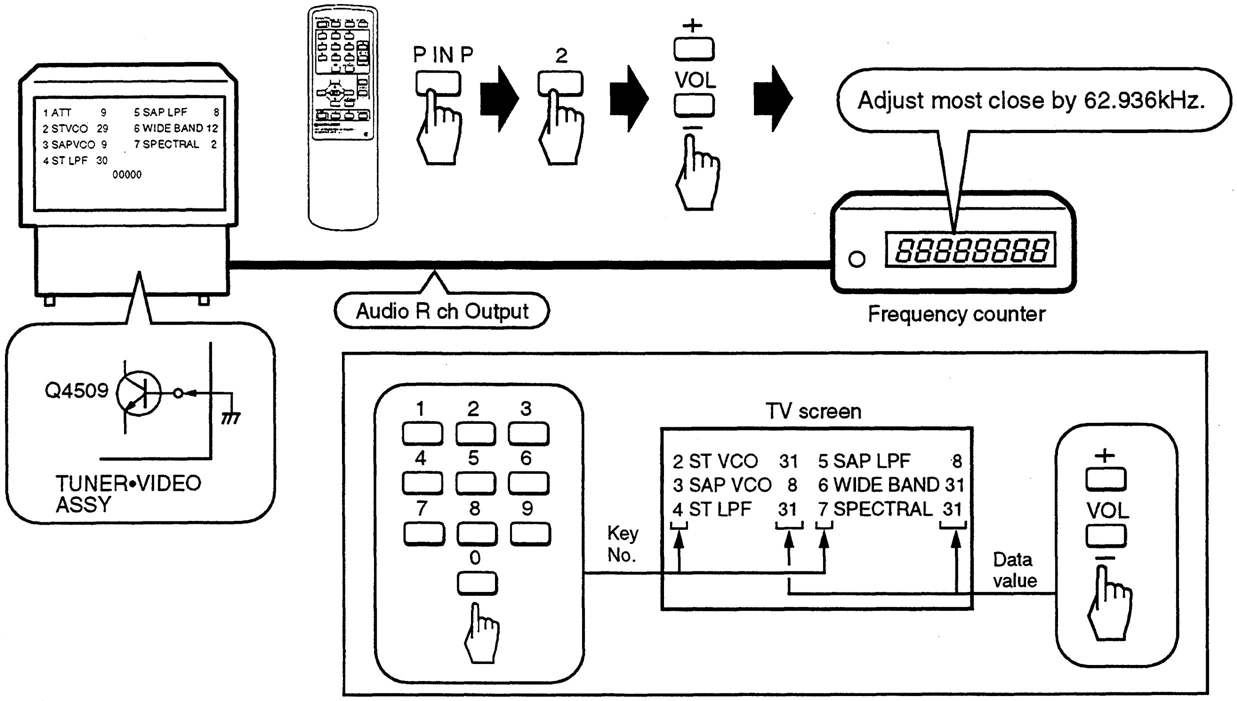
⑫-2 Video Level Adjustment ②

Start


MENU
Select " P IN P " in menu item
SET
+
CH
−
P IN P
INPUT
P IN P ANT.A CH9
☐ON/OFF
☐INPUT
☐CH☐
☐SHIFT
☐EXIT
CH9
AV I/O ASSY
VR4701
100% white level
1Vp-p ± 0.1V
CH1 (X)
CH2 (Y)
Oscilloscope
AV I/O ASSY
C1609
(not 75Ω terminal)

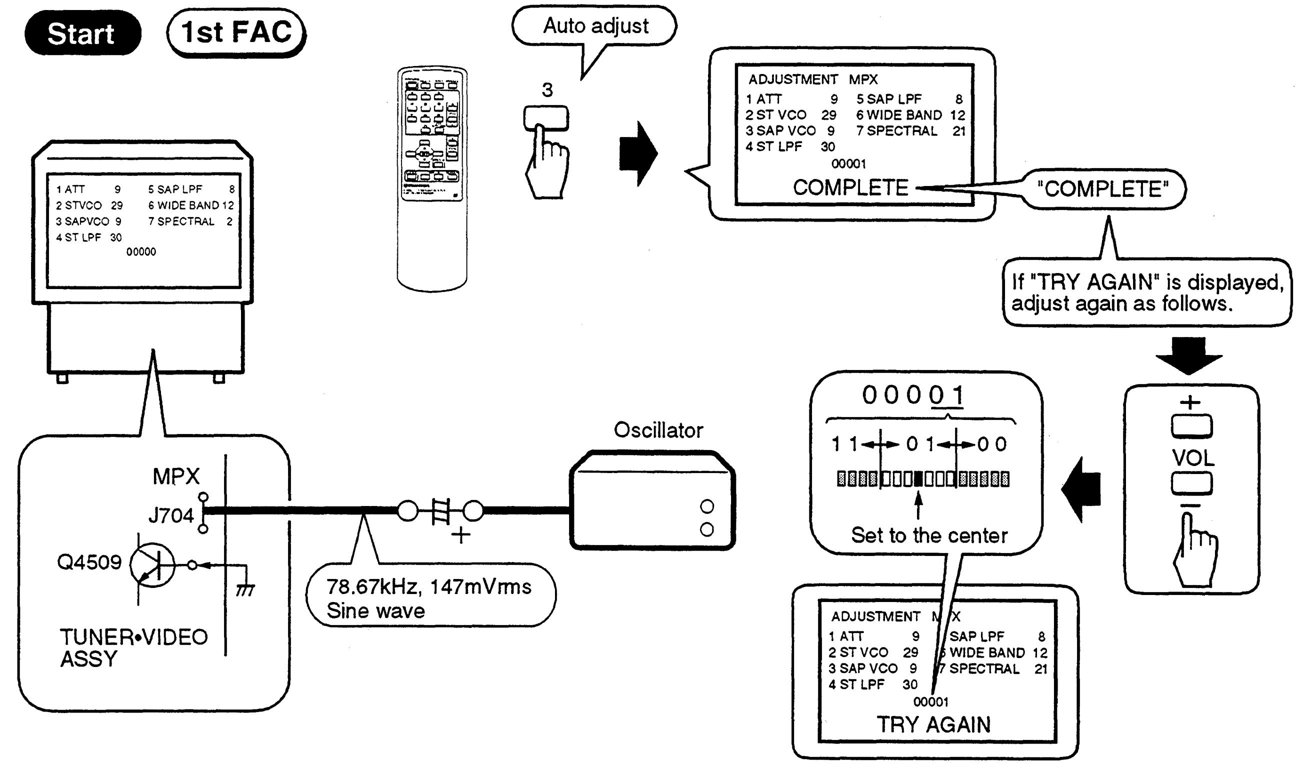
⑫-3 Stereo VCO Adjustment

Start **1st FAC**


1 ATT 9
2 STVCO 29
3 SAPVCO 9
4 ST LPF 30
5 SAP LPF 8
6 WIDE BAND 12
7 SPECTRAL 2
00000
P IN P
2
+
VOL
−
Adjust most close by 62.936kHz.
88888888
Frequency counter
Audio R ch Output
Q4509
TUNER•VIDEO ASSY
1 2 3
4 5 6
7 8 9
0
TV screen
2 ST VCO 31
3 SAP VCO 8
4 ST LPF 31
5 SAP LPF 8
6 WIDE BAND 31
7 SPECTRAL 31
Key No.
Data value
+
VOL
−

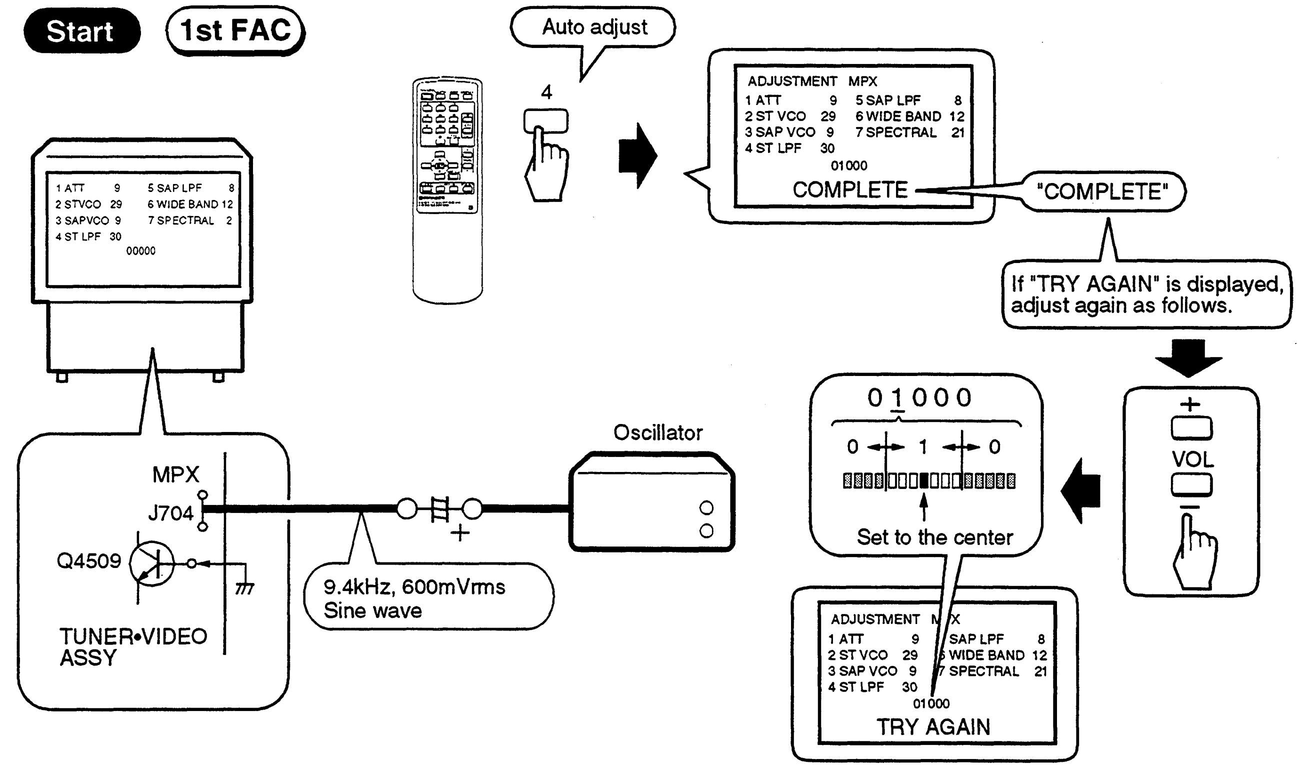
⑫-4 SAP VCO Adjustment

Note : • Perform this adjustment after the ⑫ -3 adjustment.


Start
1st FAC
Auto adjust
3
ADJUSTMENT MPX
1 ATT 9 5 SAP LPF 8
2 ST VCO 29 6 WIDE BAND 12
3 SAP VCO 9 7 SPECTRAL 21
4 ST LPF 30
00001
COMPLETE
"COMPLETE"
If "TRY AGAIN" is displayed, adjust again as follows.
1 ATT 9 5 SAP LPF 8
2 STVCO 29 6 WIDE BAND 12
3 SAPVCO 9 7 SPECTRAL 2
4 ST LPF 30
00000
00001
1 1 0 1 0 0
Set to the center
+
VOL
−
MPX
J704
Q4509
TUNER•VIDEO ASSY
Oscillator
+
78.67kHz, 147mVrms Sine wave
ADJUSTMENT MPX
1 ATT 9 5 SAP LPF 8
2 ST VCO 29 6 WIDE BAND 12
3 SAP VCO 9 7 SPECTRAL 21
4 ST LPF 30
00001
TRY AGAIN

⑫-5 STEREO LPF Adjustment

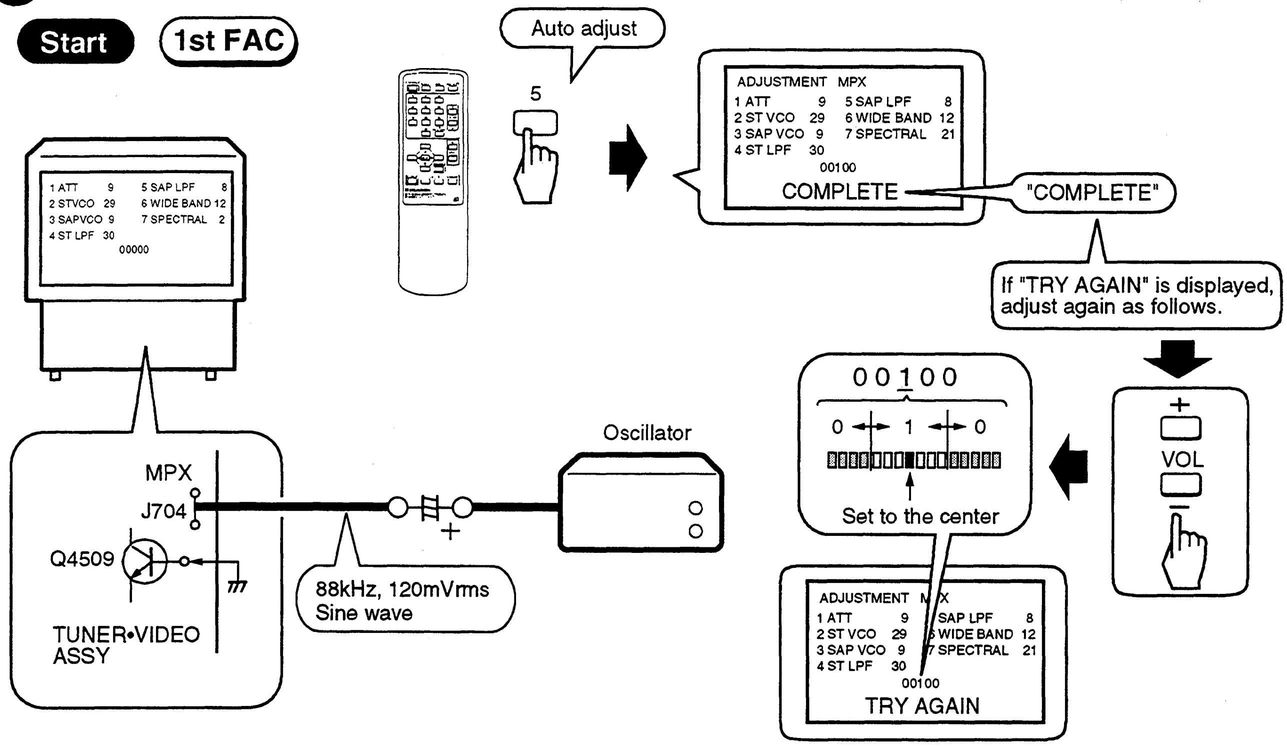
Note : • Perform this adjustment after the ⑫ -4 adjustment.


Start
1st FAC
Auto adjust
4
ADJUSTMENT MPX
1 ATT 9 5 SAP LPF 8
2 ST VCO 29 6 WIDE BAND 12
3 SAP VCO 9 7 SPECTRAL 21
4 ST LPF 30
01000
COMPLETE
"COMPLETE"
If "TRY AGAIN" is displayed, adjust again as follows.
1 ATT 9 5 SAP LPF 8
2 STVCO 29 6 WIDE BAND 12
3 SAPVCO 9 7 SPECTRAL 2
4 ST LPF 30
00000
01000
0 1 0
Set to the center
+
VOL
−
MPX
J704
Q4509
TUNER•VIDEO ASSY
Oscillator
+
9.4kHz, 600mVrms Sine wave
ADJUSTMENT MPX
1 ATT 9 5 SAP LPF 8
2 ST VCO 29 6 WIDE BAND 12
3 SAP VCO 9 7 SPECTRAL 21
4 ST LPF 30
01000
TRY AGAIN

⑫-6 SAP LPF Adjustment

Note : • Perform this adjustment after the ⑫ -5 adjustment.

Start **1st FAC**

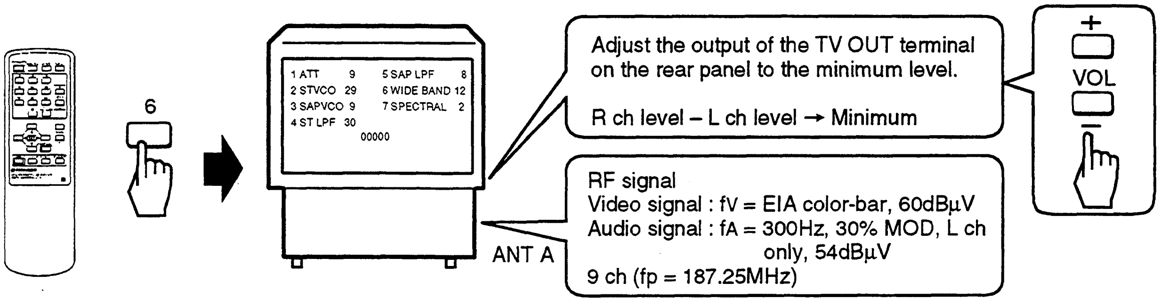

Auto adjust
5
ADJUSTMENT MPX
1 ATT 9 5 SAP LPF 8
2 ST VCO 29 6 WIDE BAND 12
3 SAP VCO 9 7 SPECTRAL 21
4 ST LPF 30
00100
COMPLETE
"COMPLETE"
1 ATT 9 5 SAP LPF 8
2 STVCO 29 6 WIDE BAND 12
3 SAPVCO 9 7 SPECTRAL 2
4 ST LPF 30
00000
MPX
J704
Q4509
TUNER•VIDEO ASSY
88kHz, 120mVrms Sine wave
Oscillator
00100
0 1 0
Set to the center
+
VOL
−
ADJUSTMENT MPX
1 ATT 9 5 SAP LPF 8
2 ST VCO 29 6 WIDE BAND 12
3 SAP VCO 9 7 SPECTRAL 21
4 ST LPF 30
00100
TRY AGAIN

If "TRY AGAIN" is displayed, adjust again as follows.

⑫-7 Separation Adjustment (WIDE BAND)

Note :
- Perform this adjustment after the ⑫ -6 adjustment.
- After this adjustment, be sure to perform the ⑫ -8 adjustment.

Start **1st FAC**


6
1 ATT 9 5 SAP LPF 8
2 STVCO 29 6 WIDE BAND 12
3 SAPVCO 9 7 SPECTRAL 2
4 ST LPF 30
00000
ANT A
+
VOL
−

Adjust the output of the TV OUT terminal on the rear panel to the minimum level.

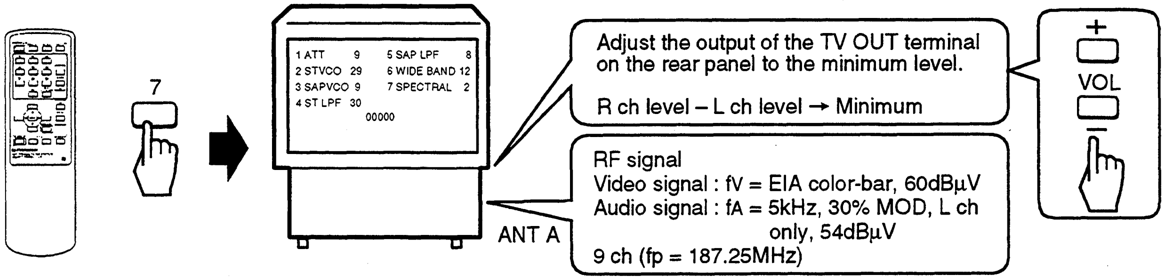
R ch level – L ch level → Minimum

RF signal
Video signal : fV = EIA color-bar, 60dBμV
Audio signal : fA = 300Hz, 30% MOD, L ch only, 54dBμV
9 ch (fp = 187.25MHz)

⑫-8 Separation Adjustment (SPECTRAL)

Note :
- Repeat step ⑫ -7 and ⑫ -8 till the best separation.
- When performing the separation adjustment, be sure to perform WIDE BAND adjustment first.
- If performing the WIDE BAND adjustment, be sure to perform SPECTRAL adjustment.

Start **1st FAC**

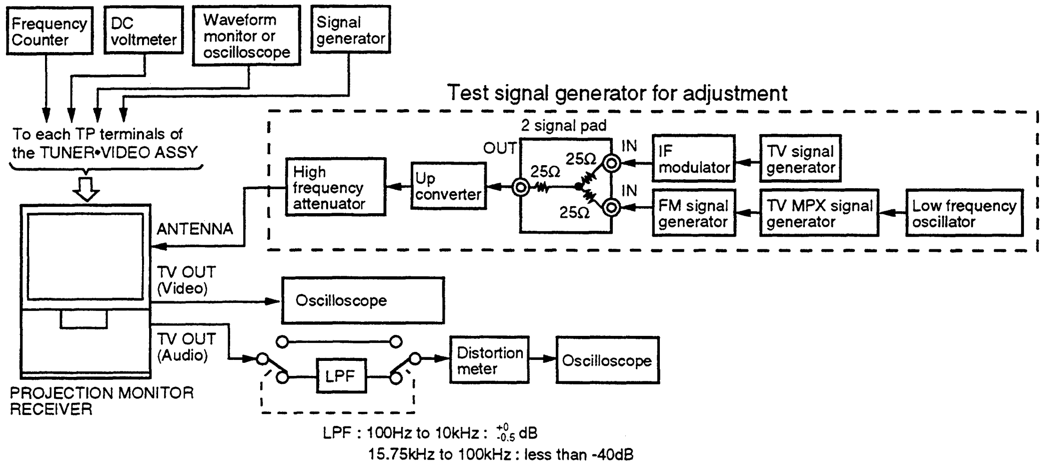

7
1 ATT 9 5 SAP LPF 8
2 STVCO 29 6 WIDE BAND 12
3 SAPVCO 9 7 SPECTRAL 2
4 ST LPF 30
00000
ANT A
+
VOL
−

Adjust the output of the TV OUT terminal on the rear panel to the minimum level.

R ch level – L ch level → Minimum

RF signal
Video signal : fV = EIA color-bar, 60dBμV
Audio signal : fA = 5kHz, 30% MOD, L ch only, 54dBμV
9 ch (fp = 187.25MHz)

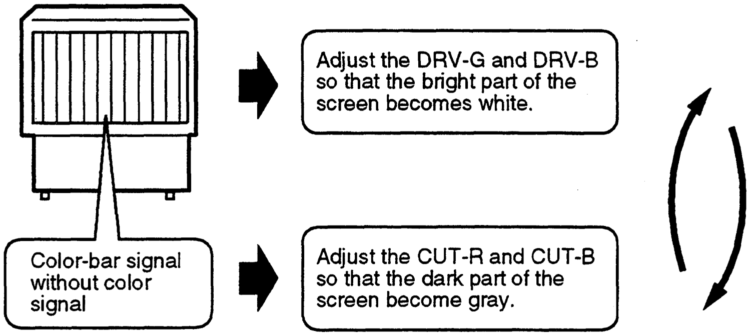
● Connection diagram for adjusting the tuner section :


Frequency Counter
DC voltmeter
Waveform monitor or oscilloscope
Signal generator
Test signal generator for adjustment
To each TP terminals of the TUNER•VIDEO ASSY
2 signal pad
OUT
IN
IN
25Ω
25Ω
25Ω
High frequency attenuator
Up converter
IF modulator
TV signal generator
FM signal generator
TV MPX signal generator
Low frequency oscillator
ANTENNA
TV OUT (Video)
Oscilloscope
TV OUT (Audio)
LPF
Distortion meter
Oscilloscope
PROJECTION MONITOR RECEIVER

LPF : 100Hz to 10kHz : $^{+0}_{-0.5}$ dB
15.75kHz to 100kHz : less than -40dB

⓭ White Balance Adjustment

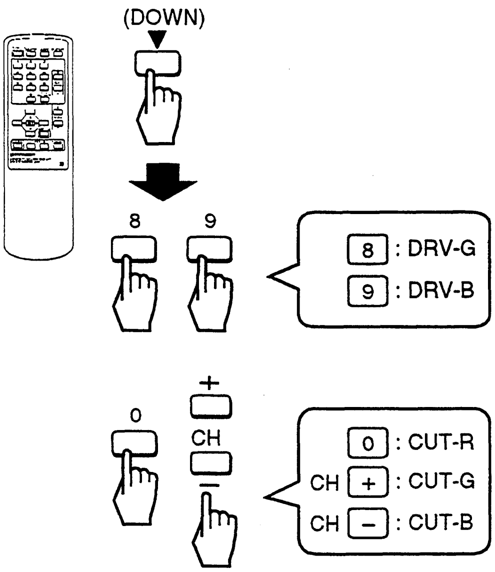
Start **1st FAC**



Color-bar signal without color signal

Adjust the DRV-G and DRV-B so that the bright part of the screen becomes white.

Adjust the CUT-R and CUT-B so that the dark part of the screen become gray.



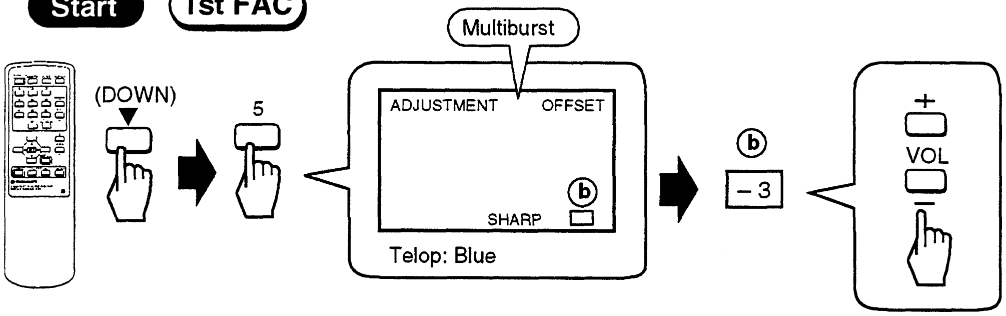
8 : DRV-G
9 : DRV-B

0 : CUT-R
CH + : CUT-G
CH − : CUT-B

⓮ PIONEER's Standard Settings

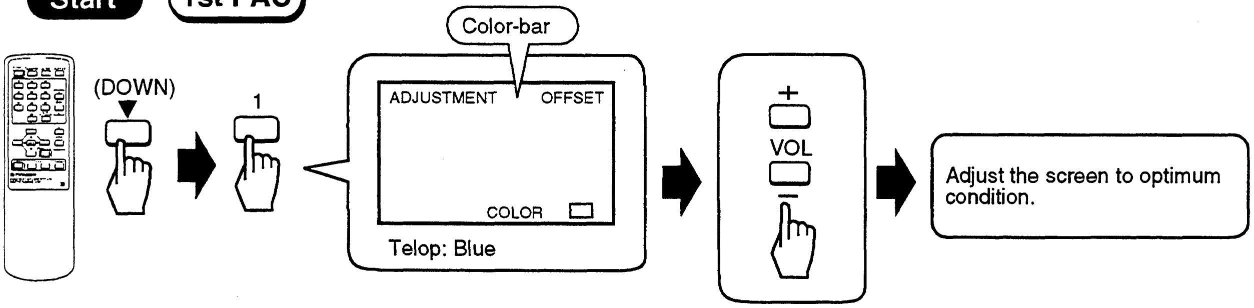
⓮-1 Sharpness Adjustment

Start **1st FAC**


Multiburst
(DOWN)
5
ADJUSTMENT
OFFSET
ⓑ
SHARP
Telop: Blue
ⓑ
– 3
+
VOL
–

⓮-2 Color Adjustment

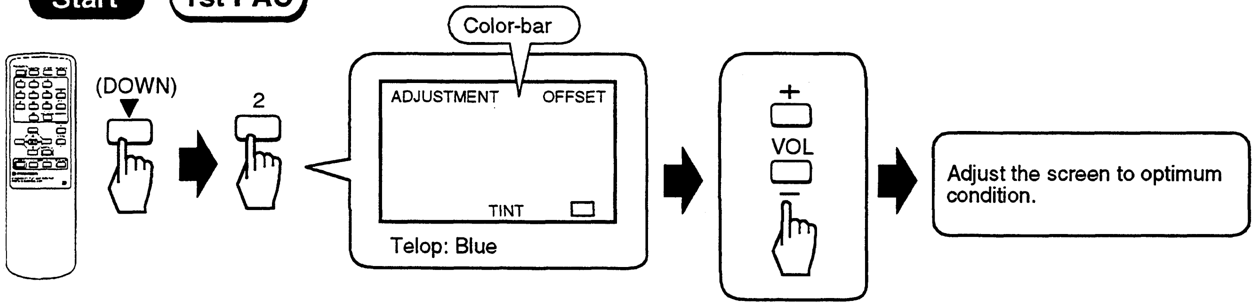
Start **1st FAC**


Color-bar
(DOWN)
1
ADJUSTMENT
OFFSET
COLOR
Telop: Blue
+
VOL
–

Adjust the screen to optimum condition.

⓮-3 Tint Adjustment

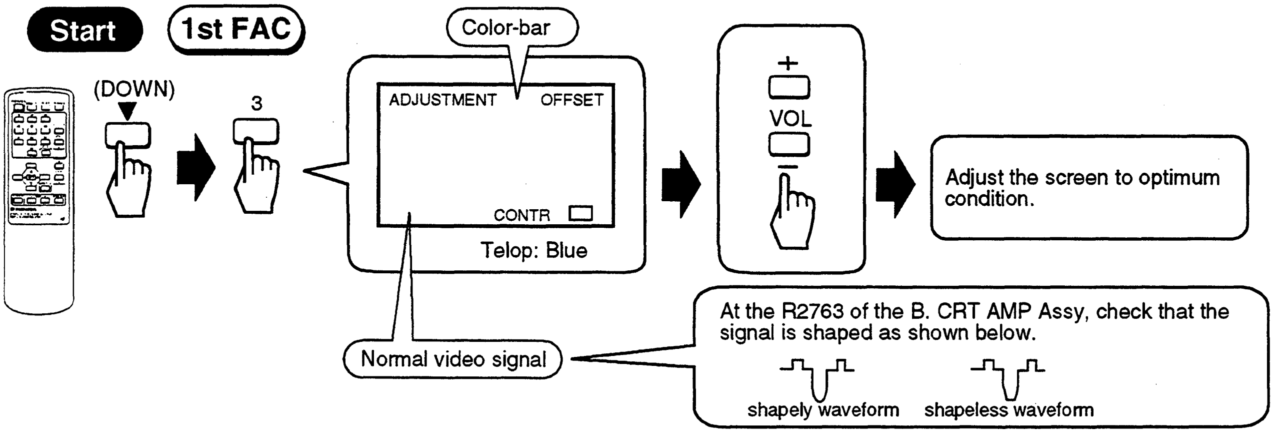
Start **1st FAC**


Color-bar
(DOWN)
2
ADJUSTMENT
OFFSET
TINT
Telop: Blue
+
VOL
–

Adjust the screen to optimum condition.

⓮-4 Contrast Adjustment

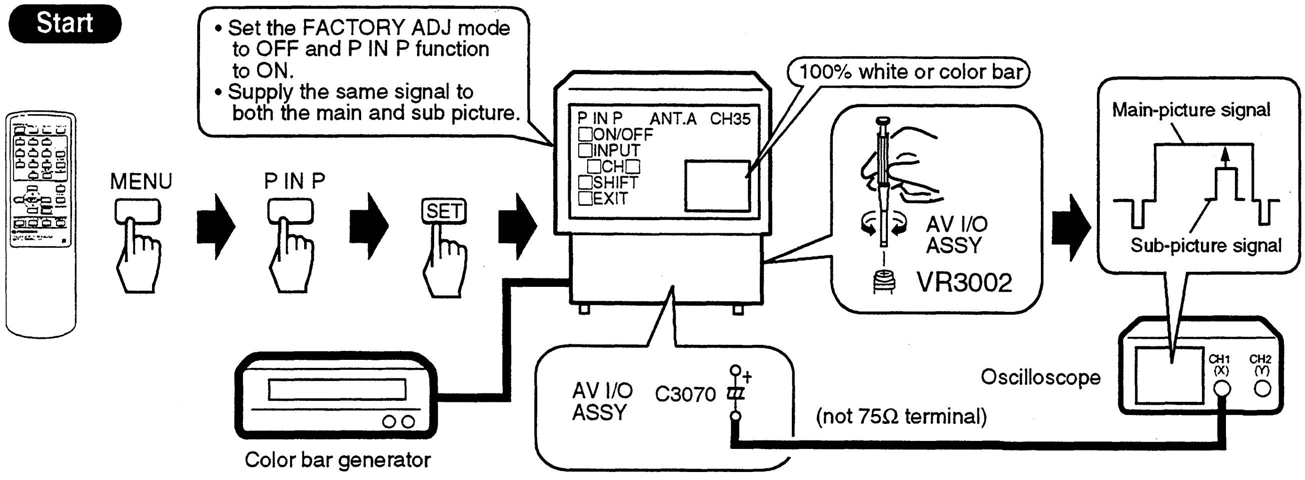
Start **1st FAC**


Color-bar
(DOWN)
3
ADJUSTMENT
OFFSET
CONTR
Telop: Blue
+
VOL
–
Normal video signal
shapely waveform
shapeless waveform

Adjust the screen to optimum condition.

At the R2763 of the B. CRT AMP Assy, check that the signal is shaped as shown below.

⑮ Y-signal Level Adjustment of Sub-picture (Adjustment for P IN P)

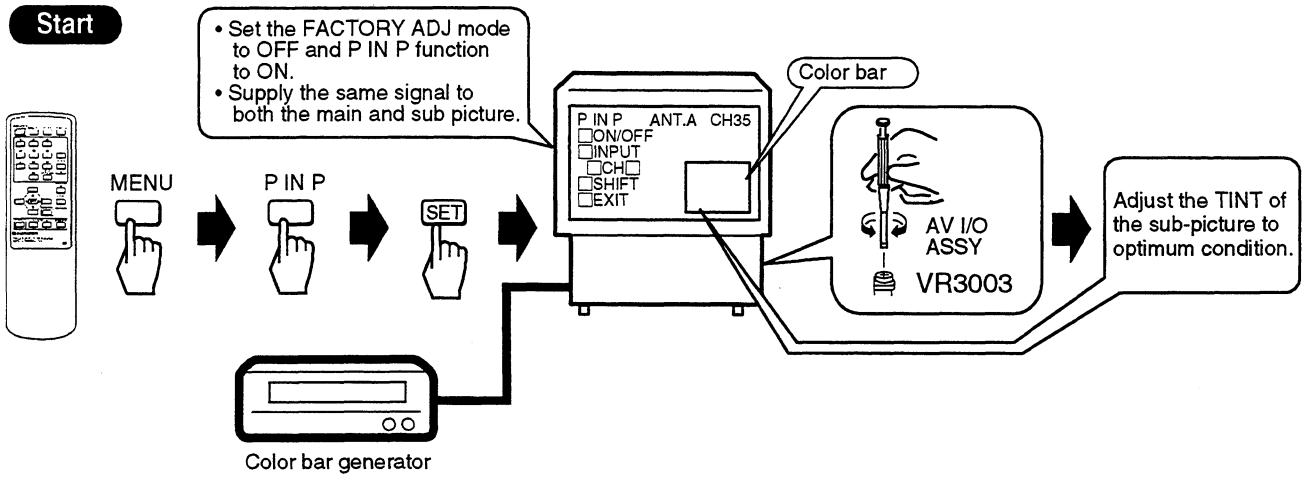


Start

- Set the FACTORY ADJ mode to OFF and P IN P function to ON.
- Supply the same signal to both the main and sub picture.

MENU
P IN P
SET
P IN P ANT.A CH35
☐ON/OFF
☐INPUT
☐CH☐
☐SHIFT
☐EXIT
100% white or color bar
AV I/O ASSY
VR3002
Main-picture signal
Sub-picture signal
Oscilloscope
CH1 (X)
CH2 (Y)
AV I/O ASSY
C3070
(not 75Ω terminal)
Color bar generator

⑯ TINT Adjustment of Sub-picture (Adjustment for P IN P)



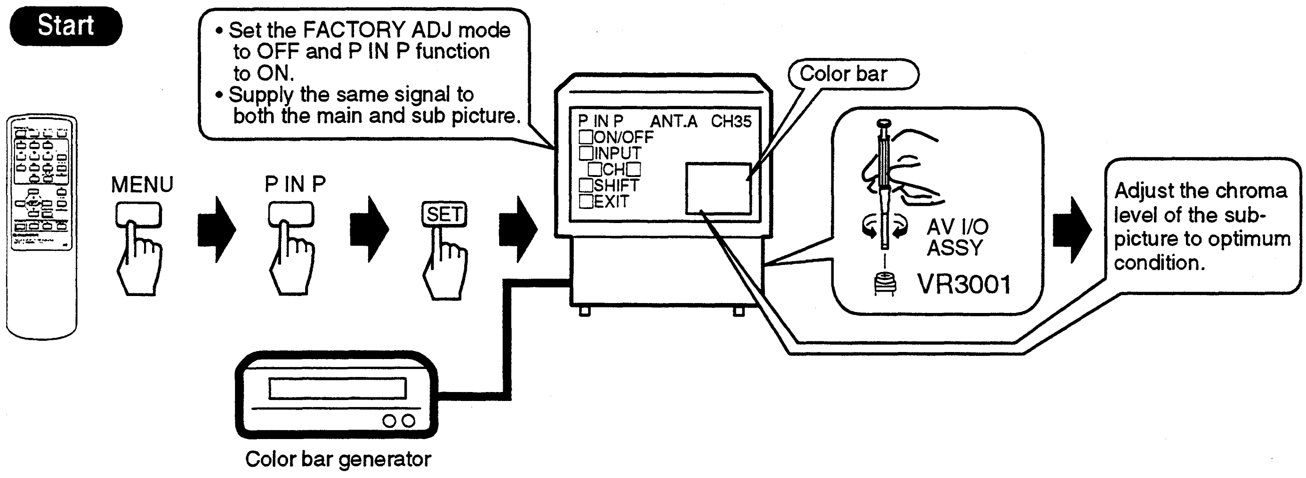
Start

- Set the FACTORY ADJ mode to OFF and P IN P function to ON.
- Supply the same signal to both the main and sub picture.

Adjust the TINT of the sub-picture to optimum condition.

MENU
P IN P
SET
P IN P ANT.A CH35
☐ON/OFF
☐INPUT
☐CH☐
☐SHIFT
☐EXIT
Color bar
AV I/O ASSY
VR3003
Color bar generator

⑰ Chroma Level Adjustment of Sub-picture (Adjustment for P IN P)



Start

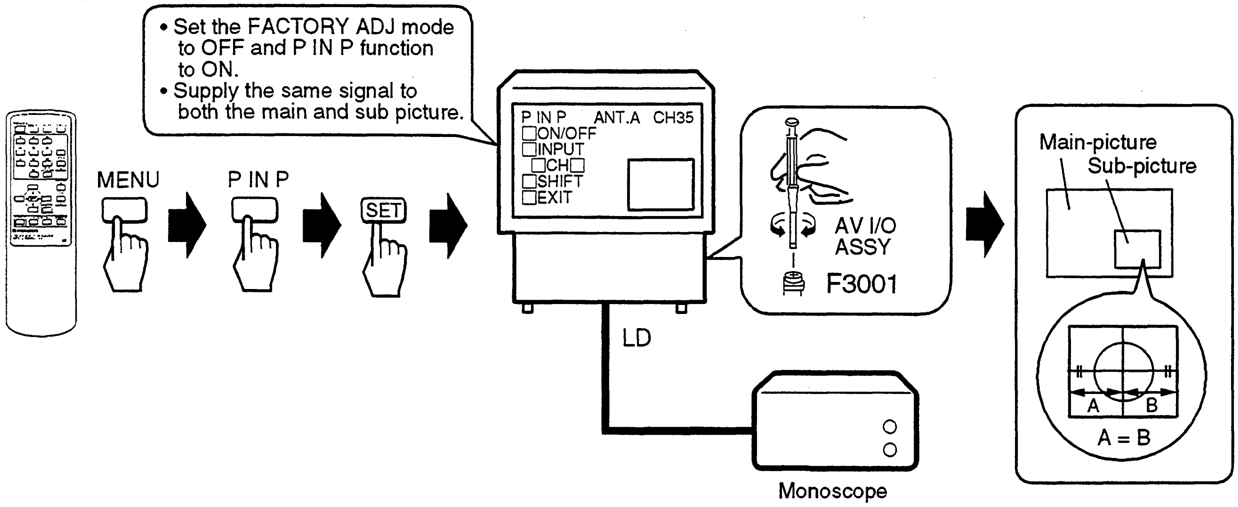
- Set the FACTORY ADJ mode to OFF and P IN P function to ON.
- Supply the same signal to both the main and sub picture.

Adjust the chroma level of the sub-picture to optimum condition.

MENU
P IN P
SET
P IN P ANT.A CH35
☐ON/OFF
☐INPUT
☐CH☐
☐SHIFT
☐EXIT
Color bar
AV I/O ASSY
VR3001
Color bar generator

⑱ Write Clock Adjustment of Sub-picture (Adjustment for P IN P)

Start

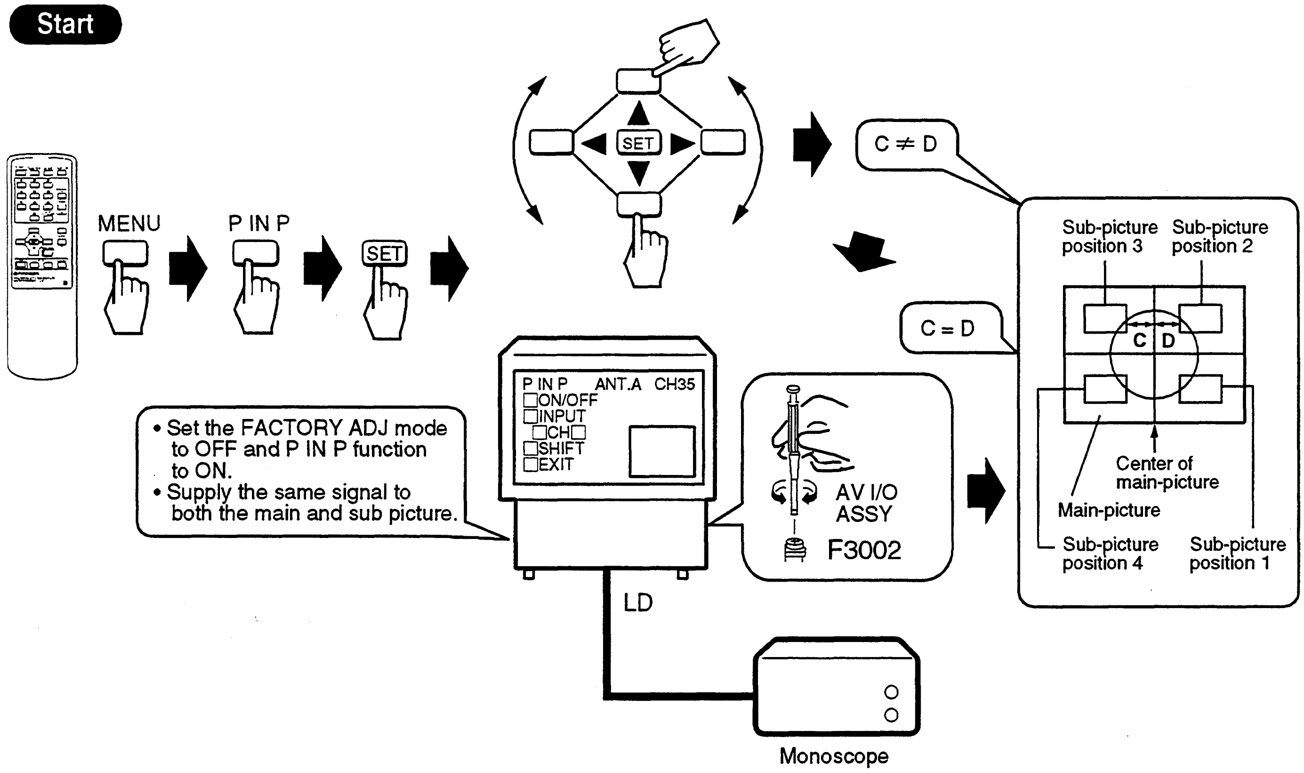


- Set the FACTORY ADJ mode to OFF and P IN P function to ON.
- Supply the same signal to both the main and sub picture.

MENU
P IN P
SET
P IN P ANT.A CH35
☐ON/OFF
☐INPUT
☐CH☐
☐SHIFT
☐EXIT
AV I/O ASSY
F3001
LD
Monoscope
Main-picture
Sub-picture
A
B
A = B

⑲ Read Clock Adjustment of Sub-picture (Adjustment for P IN P)

Start



- Set the FACTORY ADJ mode to OFF and P IN P function to ON.
- Supply the same signal to both the main and sub picture.

MENU
P IN P
SET
SET
C ≠ D
C = D
Sub-picture position 3
Sub-picture position 2
C
D
Center of main-picture
Main-picture
Sub-picture position 4
Sub-picture position 1
P IN P ANT.A CH35
☐ON/OFF
☐INPUT
☐CH☐
☐SHIFT
☐EXIT
AV I/O ASSY
F3002
LD
Monoscope

7. GENERAL INFORMATION

7.1 PARTS

7.1.1 IC

- The information shown in the list is basic information and may not correspond exactly to that shown in schematic diagrams.

■ PD5395A (TUNER•VIDEO ASSY : IC901)

- **System Control Microcomputer**

- **Pin Function**

No.	Pin Name	I/O	Active	Function	No.	Pin Name	I/O	Active	Function
1	H BLK	I	H	Sync. signal input for OSD	33	VCC	—	—	+5V power supply
2	V BLK	I	H		34	OSC1	I	—	Clock input / output for display
3	KEY	I	—	Main unit key scan signal input Analog voltage input	35	OSC2	Co	—	
4	REMOTE	I	L	Remote control signal input Decipher the PIONEER's SR signal	36	RESET	I	L	System reset Reset when L is input for more than 0.95µsec. (OSC=4.19MHz)
5	H SYNC1	I	—	H. sync. count input for tuner 1 reception When number of H-SYNC lasts eight rounds of continuation by a state of 12 - 18 during 1 msec, it judges the broadcast to be it. When other state lasts six rounds of continuation, it judge it to be broadcast nothing.	37	PF2/ N.C	Co	—	P IN P sub-picture switching signal
6	H SYNC2	I	—	H. sync. count input for tuner 2 reception	38	PF1/ N.C	Co	—	
7	AFT1	Ci	—	AFT analog voltage input for tuner 1	39	INP2/ N.C	Co	—	P IN P main-picture switching signal
8	AFT2	Ci	—	AFT analog voltage input for tuner 2	40	INP1 / D.RST	Co /Ci	—	P IN P main-picture switching signal
9	N.C	—	—	Non connection	41	ANT SW.	Co	—	Antenna input A and B switching signal H:ANT. A , L:ANT. B
10	V. MUTE	Co	H	Video mute output (Input signal switch, power ON / OFF etc.)	42	SDA	Ni/o	H	I^2C serial data input/output
11	H.SIZE.ADJ	No	H	PWM output for H. deflection size control	43	(E)SDA	Ni/o	H	I^2C serial data input/output (for E^2ROM)
12	CONV MUTE	No	L	Mute output for convergence amp IC (STK392-110) H:OFF , L:ON	44	VM.MUTE	No	H	Velocity modulation switching signal output H:ON , L:OFF
13	BASS SW	No	L	Not used (Bass boost switching signal output H:OFF, L:ON)	45	SCL	Ni/o	H	I^2C serial transfer clock
14	N.C	—	—	Non connection	46	N.C	—	—	Non connection
15	V.SIZE.ADJ	No	H	PWM output for V. deflection size control	47	(E)SCL	Ni/o	H	I^2C serial clock input/output (for E^2ROM)
16	PIP.RST	No	H	Reset signal output for P IN P IC (HD49420FS) H:ON , L:OFF	48	V.RST	No	H	Not used
17	SRR.SW	Co	H	Switching signal output for matrix surround H:ON , L:OFF	49	DATA	Co	L	Serial data output (P IN P, convergence)
18	PORT W1	No	—	Not used (Pulse output for checking microcomputer operation)	50	CLK	Co	L	Serial clock output (P IN P, convergence)
19	N.C	—	—	Non connection	51	A MUTE	Co	H	Audio mute output H:ON, L:OFF
20	CONV.ENB	No	L	Data enable signal output of convergence IC (PM0011A)	52	ROM RST	Co	H	Reset output for E^2PROM
21	OPTION	Ni	—	Not used	53	AC CLK	Ci	H	AC clock detection input Use for AC power OFF detection (Reset process for three AC wave are lacked)
22	PIP.ENB	No	H	Data enable signal output for P IN P IC	54	PORT W2	No	—	Not used (Pulse output for checking microcomputer operation)
23	S.OX	Ni	—	Not used (Signal input for S input detection H:COMP. V input , L:Y/C input)	55	RELAY	No	L	Power supply relay control signal output H:OFF, L:ON
24	AVCC	—	—	Analog power supply Apply +5V.	56	N.C	—	—	Non connection
25	HLF	—	—	Connect the external parts for CCD timing signal generating circuit	57	LIN.WHITE	No	H	PWM output for linear white level control
26	RVCO	—	—		58	C.C.MUTE	No	H	Not used
27	VHOLD	—	—	Connect the external parts for CCD reference voltage generating circuit	59	VOLUME	No	H	PWM output for audio level control
28	CVIN	I	—	Video signal input for CCD (2.0Vp-p)	60	N.C	—	—	Non connection
29	CNVSS	I	—	Connect to Vss	61	OSD BLK	Co	H	Signal output for OSD mute and velocity modulation mute
30	XIN	I	—	Input / Output pins of main clock generating circuit Connect a 8.0MHz ceramic oscillator.	62	OSD B	Co	H	Video output for OSD
31	XOUT	Co	—		63	OSD G	Co		
32	VSS	—	—	Supplies 0V to Vss.	64	OSD R	Co		

I:Input O:Output Ci:CMOS input Co:CMOS output No:N ch open-drain output Ni:N ch open-drain input

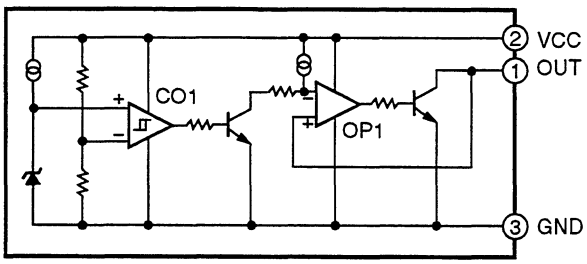
- **Main-picture and P IN P sub-picture switching signal logic**

FUNCTION	Main-picture		Sub-picture	
	INP1	INP2	PF1	PF2
LD/DVD	H	H	H	H
VIDEO	L	H	L	H
VIDEO F.	H	L	H	L
TV	L	L	L	L

■ PST9146 (TUNER•VIDEO ASSY : IC903)

- **System Reset IC**

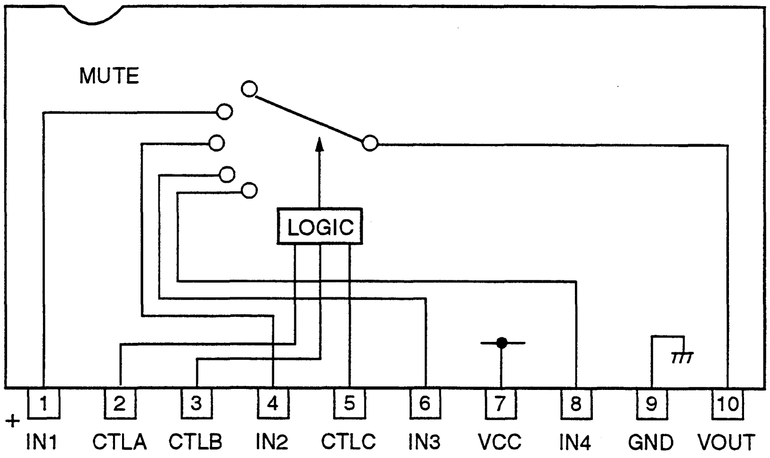
- **Block Diagram**


② VCC
① OUT
③ GND
CO1
OP1
+
−
−
+

■ BA7644AN (AV I/O ASSY : IC1602, IC1603)

- **Video and Audio Signal Switch**

- **Block Diagram**


MUTE
LOGIC
+
1 IN1
2 CTLA
3 CTLB
4 IN2
5 CTLC
6 IN3
7 VCC
8 IN4
9 GND
10 VOUT

- **Truth Table**

Pin No.	2	3	5	10
—	CTLA	CTLB	CTLC	VOUT
1	L(OPEN)	L(OPEN)	L(OPEN)	IN1
4	L(OPEN)	H	L(OPEN)	IN2
6	H	L(OPEN)	L(OPEN)	IN3
8	H	H	L(OPEN)	IN4
—	*	*	H	MUTE

* : Either L (OPEN) or H approve

■ PM0011AS (CONVER CONTROL ASSY : IC2301 - IC2303)

• Digital / Analog Convergence Correction IC

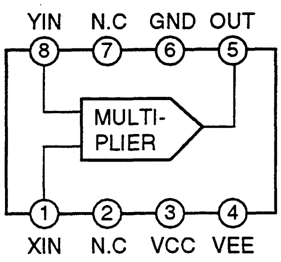
• Pin Function

No.	Pin Name	I/O	Function	No.	Pin Name	I/O	Function
1	INH1	I	Signal input for H 1st	22	MPYIN2	I	Multiplicator input 2
2	INH2	I	Signal input for H 2nd	23	MPYIN1	I	Multiplicator input 1
3	INH3	I	Signal input for H 3rd	24	MPYOUT	O	Multiplicator output
4	INH4	I	Signal input for H 4th	25	VOUT3	O	DA output 3 for V
5	INX1	I	Signal input for H 5th (for business)	26	VOUT2	O	DA output 2 for V
6	INX2	I	Signal input for H 6th (for business)	27	VOUT1	O	DA output 1 for V
7	ICADDR	I	Address input	28	HOUT3	O	DA output 3 for H
8	HV	—	H, V selection	29	HOUT2	O	DA output 2 for H
9	VEE	—	-5V power supply	30	HOUT1	O	DA output 1 for H
10	CLKB	I	Clock input (internal connection with pin 34)	31	CEB	—	Enable (internal connection with pin 13)
11	MUTEB	I	Mute input (internal connection with pin 33) MUTE=0V	32	DATA	—	Data (internal connection with pin 12)
12	DATA	I	Data input (internal connection with pin 32)	33	MUTEB	I	Mute input (internal connection with pin 11) MUTE=0V
13	CEB	I	Enable input (internal connection with pin 31)	34	CLKB	I	Clock input (internal connection with pin 10)
14	INJ	—	Injector Connect a 2kΩ resistor between this pin and VCC (+5V).	35	PCSEL	—	Mode switch For business : -5V , For generally : 0V
15	INV1	I	Signal input for V 1st	36	A2INP	I	OP amp 2 + input
16	INV2	I	Signal input for V 2nd	37	A2INM	I	OP amp 2 – input
17	INV3	I	Signal input for V 3rd	38	A1INP	I	OP amp 1 + input
18	INV4	I	Signal input for V 4th	39	A1INM	I	OP amp 1 – input
19	INX3	I	Signal input for V 5th (for business)	40	A1OUT	O	OP amp 1 output
20	INX4	I	Signal input for V 6th (for business)	41	A2OUT	O	OP amp 2 output
21	VCC	—	+5V power supply	42	GND	—	Ground

■ CA0005AM (CONVER CONTROL ASSY : IC2309)

• Single 2 Inputs Analog Multiplicator IC

• Block Diagram



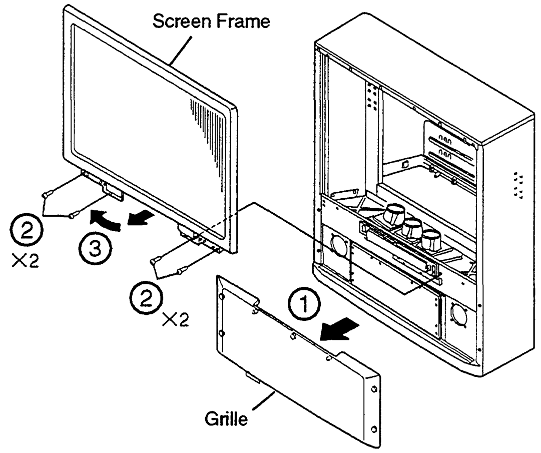
• Pin Function

No.	Pin Name	I/O	Function
1	XIN	I	X input
2	N.C	—	Non connection
3	VCC	—	Power supply
4	VEE	—	Power supply
5	OUT	O	Output
6	GND	—	Ground
7	N.C	—	Non connection
8	YIN	I	Y input

7.2 DISASSEMBLY / ASSEMBLY

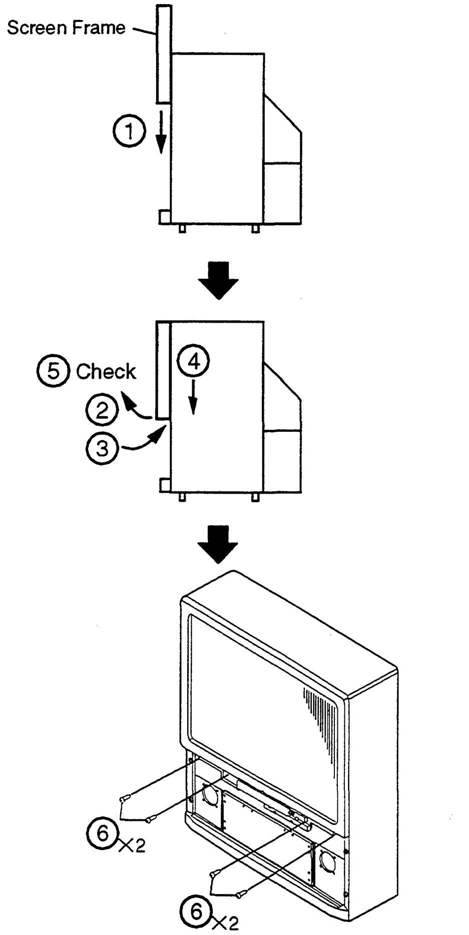
7.2.1 Disassembling the Screen Frame

- Disassembly : ① → ② → ③


Screen Frame
② ×2
③
② ×2
①
Grille

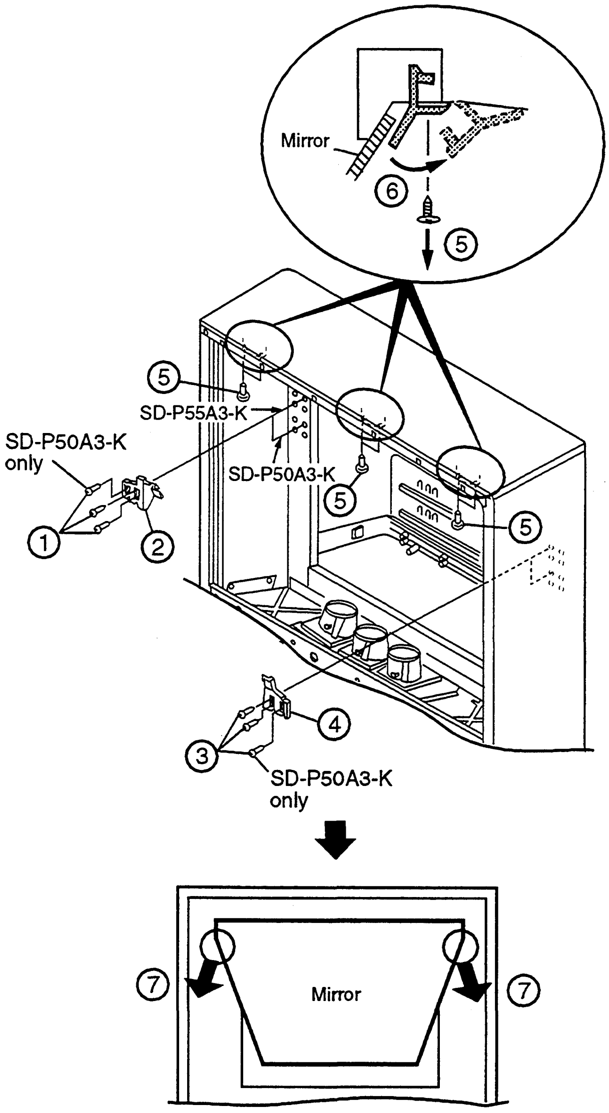
7.2.2 Assembling the Screen Frame

- Assembly : ① → ② → ③→ ④ → ⑤→ ⑥


Screen Frame
①
⑤ Check
④
②
③
⑥×2
⑥×2

7.2.3 Mirror

- Disassembly : ①→②→③→④→⑤→⑥→⑦
- Assembly : ⑦→⑥→⑤→④→③→②→①


Mirror
⑥
⑤
⑤
SD-P55A3-K
SD-P50A3-K only
SD-P50A3-K
⑤
⑤
①
②
④
③
SD-P50A3-K only
⑦
Mirror
⑦

7.3 REPLACEMENT

7.3.1 CRT Assy

(1) Remove four screws ① to remove the CRT Assy, and remove the R, G or B CRT AMP Assy, VM Coil and Deflection Yoke (②).

(2) Unhook two Purse Locks ③ from Anode Cables.

(3) Remove two screws ④ to remove the HV Distributor and pull out the Anode Cable (⑤).

Caution :Refer to caution contents written with "Caution at Removing the Anode Cable From the HV Distributor" on page 115.

(4) Install the replacement CRT Assy to the CRT Stand and assemble the Deflection Yoke, VM Coil and R, G or B CRT AMP Assy.

(5) Plug the Anode Cable into the HV Distributor and assemble the HV Distributor to the CRT Stand.

(6) Perform the Anode Cable wiring.

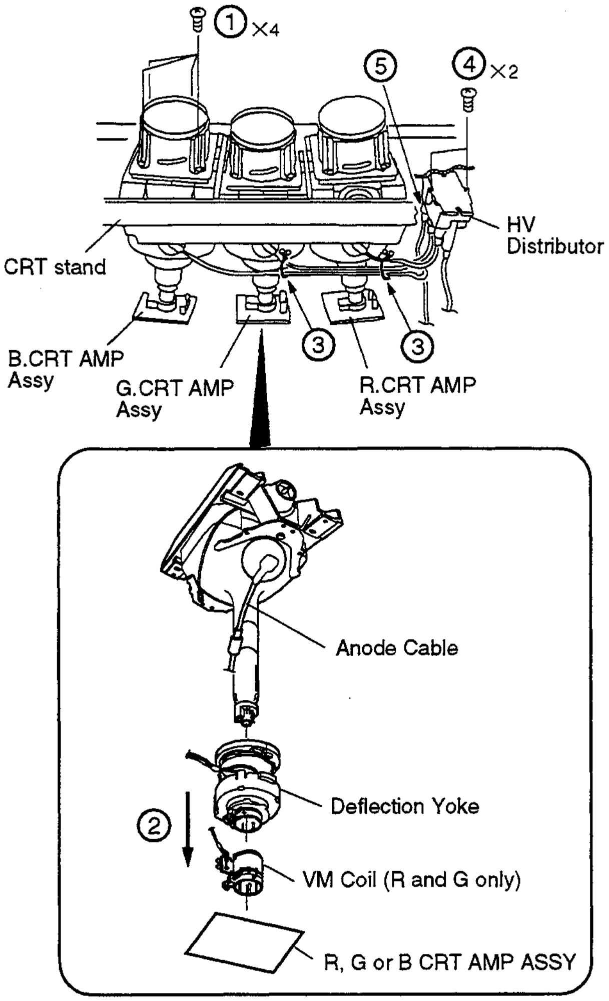

①×4
⑤
④×2
HV Distributor
CRT stand
B.CRT AMP Assy
G.CRT AMP Assy
③
③
R.CRT AMP Assy
Anode Cable
Deflection Yoke
②
VM Coil (R and G only)
R, G or B CRT AMP ASSY

Fig. 1 Replace the CRT Assy

7.3.2 POWER SUPPLY SERVICE Assy

The POWER SUPPLY SERVICE Assy seems to be Fig. 2 is constituted.

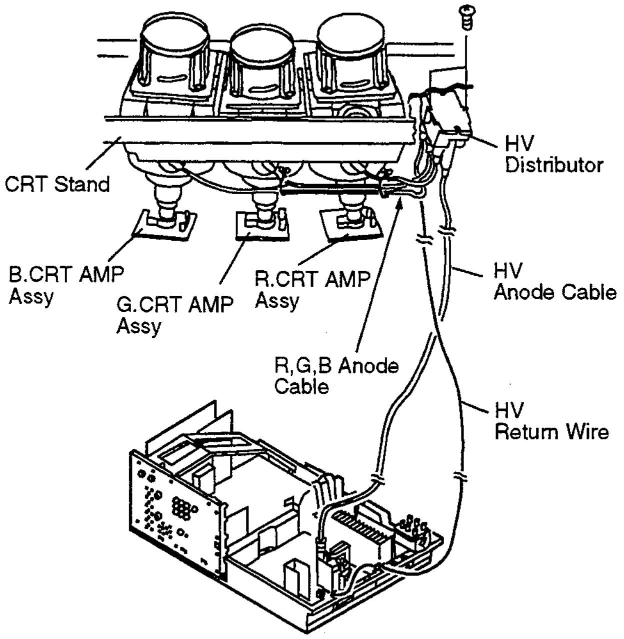

HV Distributor
CRT Stand
B.CRT AMP Assy
G.CRT AMP Assy
R.CRT AMP Assy
HV Anode Cable
R,G,B Anode Cable
HV Return Wire

Fig. 2 Replace the POWER SUPPLY SERVICE Assy

When replacing the POWER SUPPLY SERVICE Assy, replace the POWER SUPPLY Assy and HV Distributor together.

(1) Remove fixing screws which chassis is fixed in the cabinet from rear side of the cabinet and pull out the chassis.

(2) Remove two screws to remove the HV Distributor in the CRT Stand.

(3) Solve the wiring of periphery of the POWER SUPPLY Assy, disconnect cords, lead wires and connectors etc. connected to the POWER SUPPLY Assy.

(4) Remove R, G and B Anode Cables from the HV Distributor.

(5) Replace the POWER SUPPLY Assy and fixes it in the chassis.

(6) Connect cords, lead wires and connector etc. to the POWER SUPPLY Assy and does wiring.

(7) Inserts Anode Cable etc. avoided with step (4) in the HV Distributor.

(8) Fixes the HV Distributor in the CRT Stand.

(9) Fixes the chassis in the cabinet.

• Caution at Removing the Anode Cable From the HV Distributor

Anode Cable between the Flyback Transformer (FBT) is connected to the CRT through the HV Distributor.
When replacing the CRT or POWER SUPPLY SERVICE Assy, your hands may be injured when pull out direct Anode Cable from HV Distributor fixed in the CRT Stand.
When removing the R, G and B Anode Cables, HV Anode Cable etc. from the HV Distributor, remove HV Distributor from the CRT Stand, and remove it after putting it in the place where is flat, became stable.

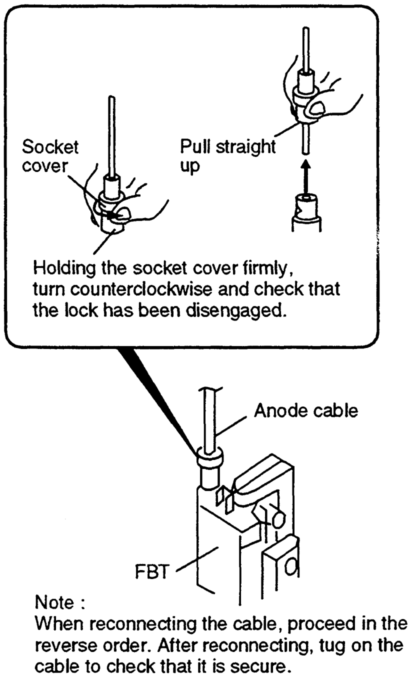
7.4 MEASURING METHOD

Disconnect the FBT anode cable as shown in Fig. 3.
Measure at the point where the cable enters the FBT.

Caution : Take extra precaution when measuring the voltage. High voltage are also present in surrounding circuit boards. (CRT AMP Assy, POWER SUPPLY SERVICE Assy).

SERVICEMAN WARNING

Before removing the Anode Cable. turn off the power, unplug the AC plug and let the unit discharge for more than 1 minute.



Holding the socket cover firmly, turn counterclockwise and check that the lock has been disengaged.

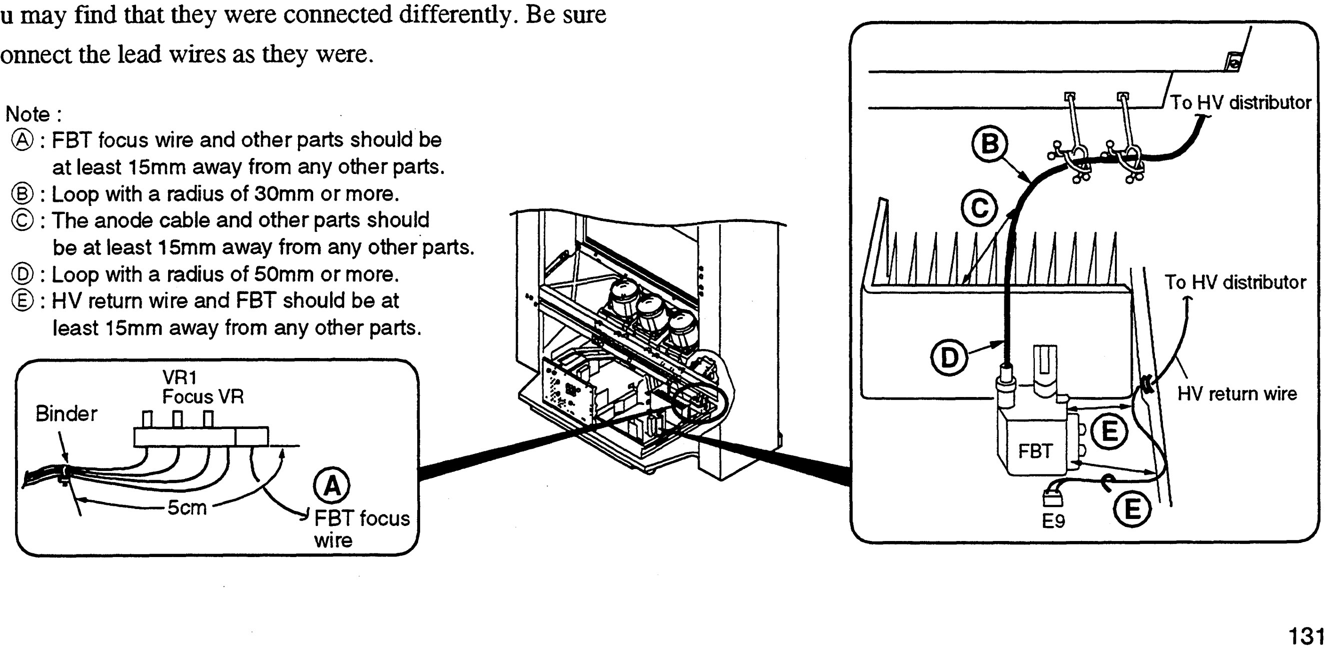
Note :
When reconnecting the cable, proceed in the reverse order. After reconnecting, tug on the cable to check that it is secure.

Fig. 3

7.5 WIRING DIAGRAM

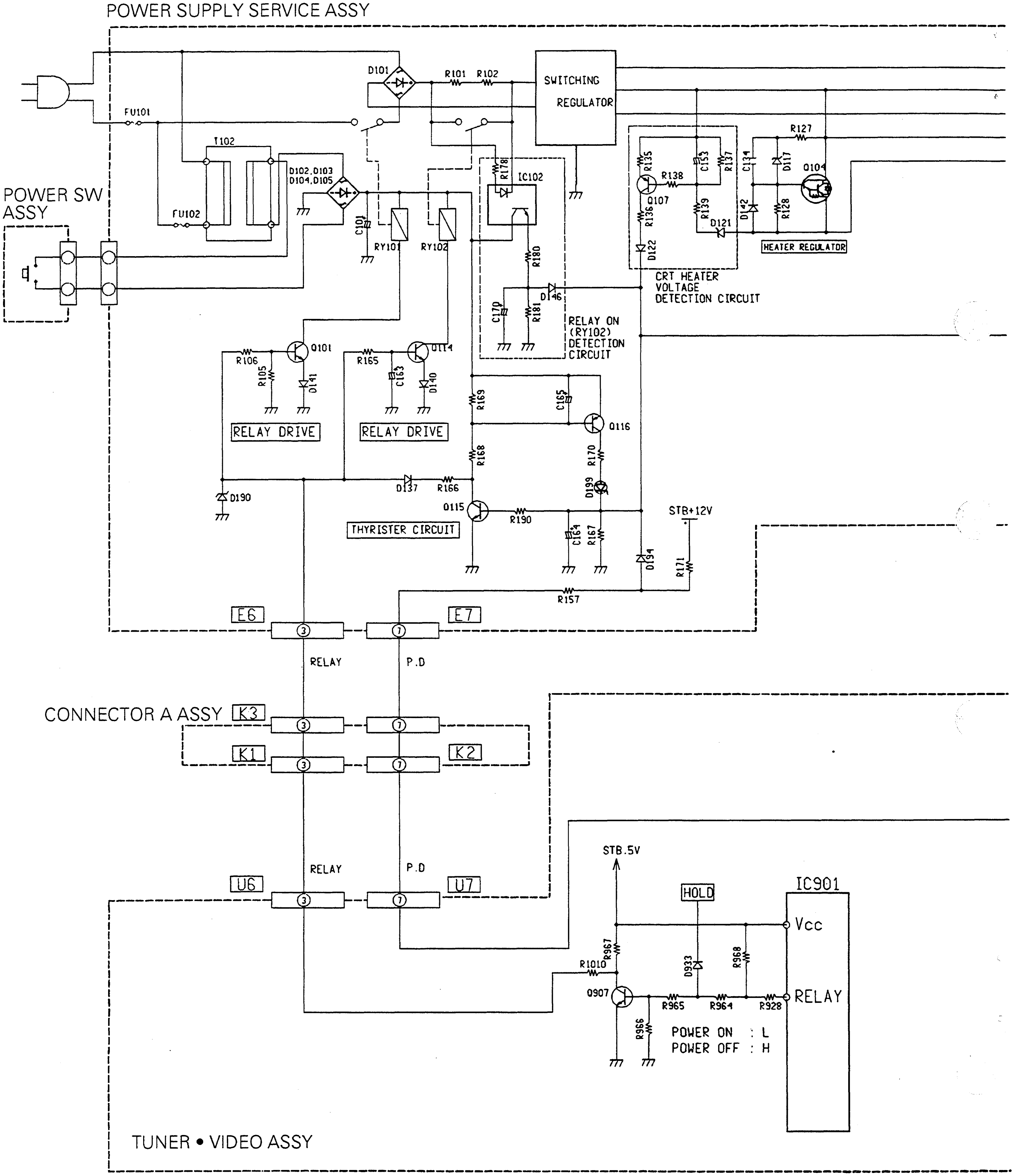
Reconnect any disconnected lead wires of the Projection monitor receiver.
The important points for connection of the lead wires are as shown below.
You may find that they were connected differently. Be sure reconnect the lead wires as they were.

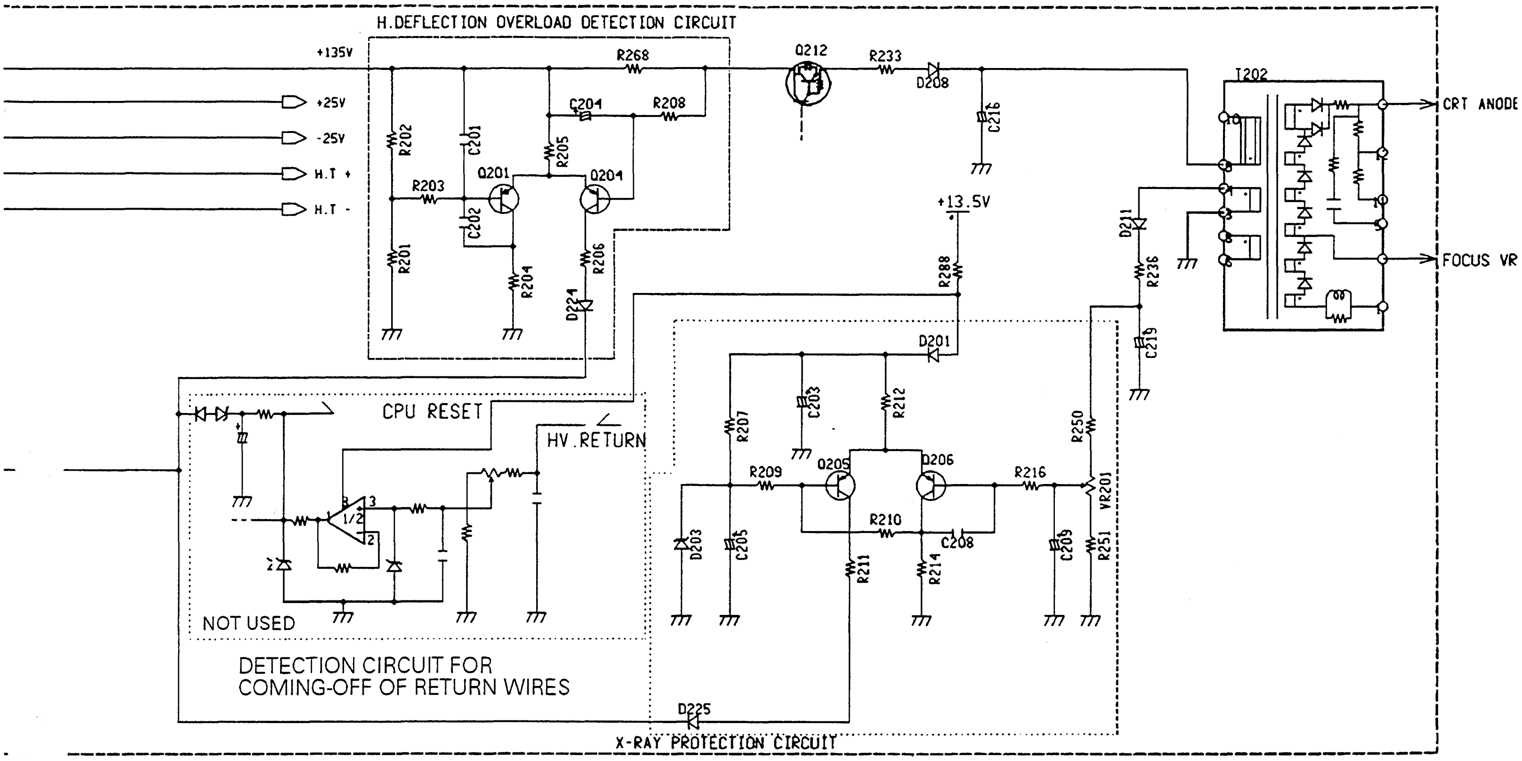
Note :
Ⓐ : FBT focus wire and other parts should be at least 15mm away from any other parts.
Ⓑ : Loop with a radius of 30mm or more.
Ⓒ : The anode cable and other parts should be at least 15mm away from any other parts.
Ⓓ : Loop with a radius of 50mm or more.
Ⓔ : HV return wire and FBT should be at least 15mm away from any other parts.



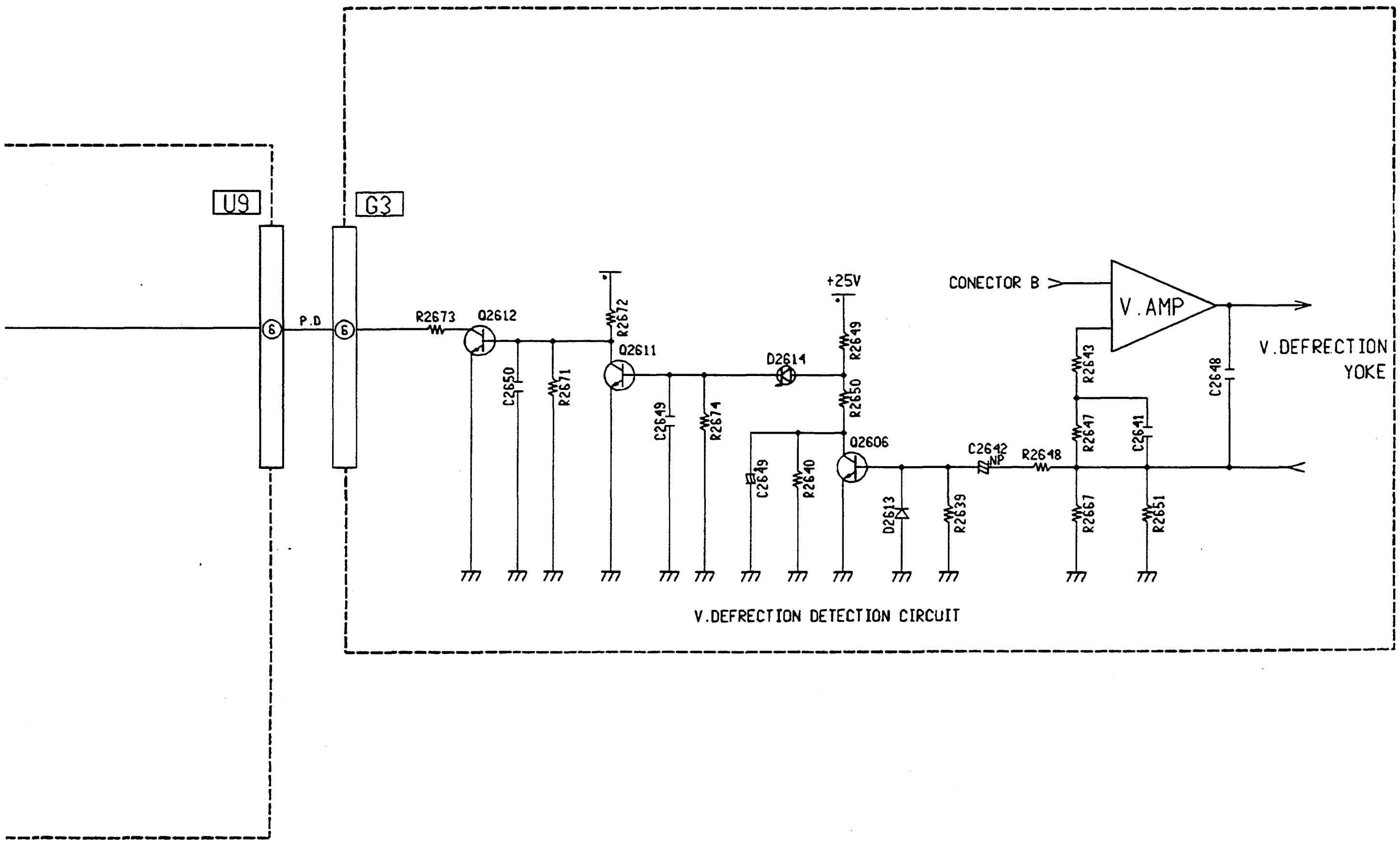
7.6 BLOCK DIAGRAM

7.6.1 PROTECTION BLOCK

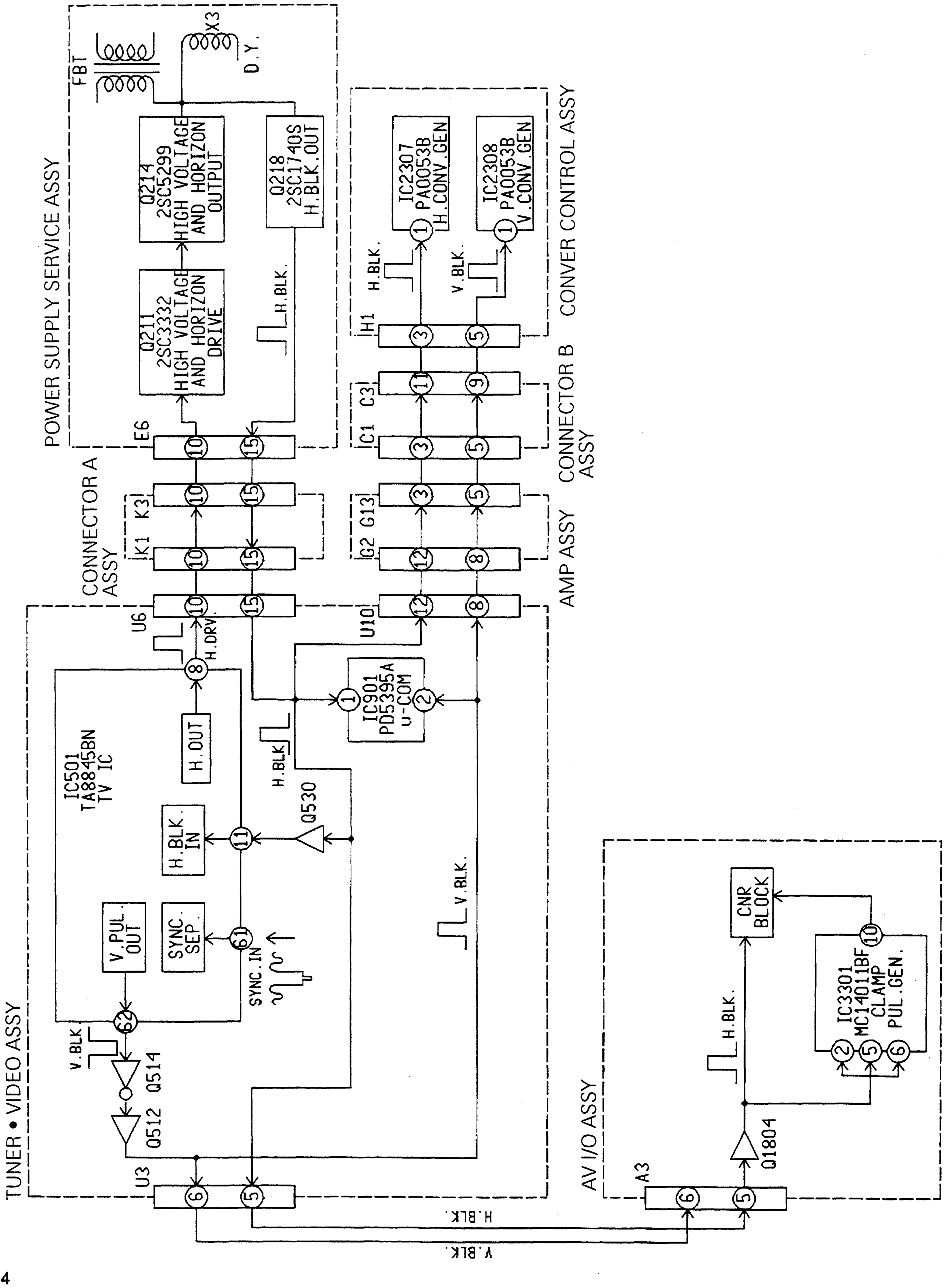

POWER SUPPLY SERVICE ASSY
POWER SW ASSY
FU101
FU102
T102
D101
R101
R102
SWITCHING REGULATOR
D102,D103 D104,D105
C101
RY101
RY102
R178
IC102
R180
R181
C170
D146
RELAY ON (RY102) DETECTION CIRCUIT
R135
R153
R137
R138
Q107
R136
R139
D122
D121
R127
C134
D117
Q104
D142
R128
HEATER REGULATOR
CRT HEATER VOLTAGE DETECTION CIRCUIT
R106
R105
Q101
D141
RELAY DRIVE
R165
C163
Q114
D140
RELAY DRIVE
R169
C165
Q116
R168
R170
D199
D190
D137
R166
Q115
R190
THYRISTER CIRCUIT
C164
R167
D194
STB+12V
R171
R157
E6
E7
RELAY
P.D
CONNECTOR A ASSY
K3
K1
K2
RELAY
P.D
U6
U7
STB.5V
HOLD
IC901
Vcc
RELAY
R967
R1010
D933
R968
Q907
R965
R964
R928
R966
POWER ON : L
POWER OFF : H
TUNER • VIDEO ASSY


H.DEFLECTION OVERLOAD DETECTION CIRCUIT
+135V
+25V
-25V
H.T +
H.T -
R268
R202
C201
C204
R208
R205
R203
Q201
Q204
C202
R201
R204
R206
D224
Q212
R233
D208
C216
+13.5V
R288
T202
CRT ANODE
FOCUS VR
D211
R236
C219
D201
R207
C203
R212
R250
VR201
R209
Q205
Q206
R216
R210
C208
D203
C205
R211
R214
C209
R251
CPU RESET
HV.RETURN
1/2
NOT USED
DETECTION CIRCUIT FOR
COMING-OFF OF RETURN WIRES
D225
X-RAY PROTECTION CIRCUIT

AMP(CONVERGENCE,AUDIO,V.AMP,VM) ASSY


U9
G3
6
P.D
6
R2673
Q2612
C2650
R2671
R2672
Q2611
C2649
R2674
D2614
+25V
R2649
R2650
Q2606
C2649
R2640
D2613
R2639
C2642
NP
R2648
CONECTOR B
V.AMP
R2643
R2647
C2641
R2667
R2651
C2648
V.DEFRECTION
YOKE
V.DEFRECTION DETECTION CIRCUIT

7.6.2 H.V. BLOCK AND CIRCUIT BLOCK

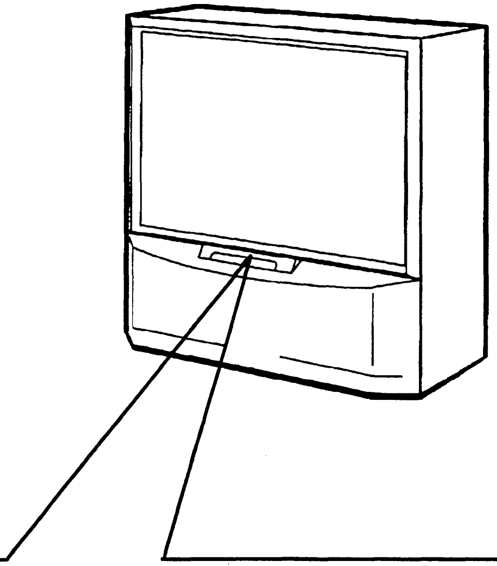

POWER SUPPLY SERVICE ASSY
FBT
X3
D.Y.
Q214 2SC5299 HIGH VOLTAGE AND HORIZON OUTPUT
Q211 2SC3332 HIGH VOLTAGE AND HORIZON DRIVE
Q218 2SC1740S H.BLK.OUT
H.BLK.
E6
10
15
CONNECTOR A ASSY
K1 K3
CONVER CONTROL ASSY
IC2307 PA0053B H.CONV.GEN
IC2308 PA0053B V.CONV.GEN
H.BLK.
V.BLK.
1
H1
3
5
11
9
CONNECTOR B ASSY
C1 C3
G2 G13
12
8
AMP ASSY
U10
U6
H.DRV.
IC901 PD5395A u-COM
IC501 TA8845BN TV IC
H.OUT
H.BLK. IN
SYNC. SEP.
V.PUL. OUT
SYNC. IN
11
61
62
Q530
H.BLK
V.BLK.
V.BLK
Q514
Q512
U3
6
5
TUNER • VIDEO ASSY
AV I/O ASSY
A3
Q1804
CNR BLOCK
IC3301 MC14011BF CLAMP PUL.GEN.
H.BLK.
H.BLK.
V.BLK.

8. PANEL FACILITIES AND SPECIFICATIONS

■ PANEL FACILITIES

• FRONT PANEL

A flip-down door conceals the control panel. Push gently and release, to open the door. To close the door, lift it back up into place.
NOTE:
If you accidentally pull the door, it may not shut properly. Push the door back in to shut it.



① **POWER STANDBY/ON indicator**

② **MAIN POWER switch**
Press once to turn on the power (STANDBY MODE). Press again to turn off the power.

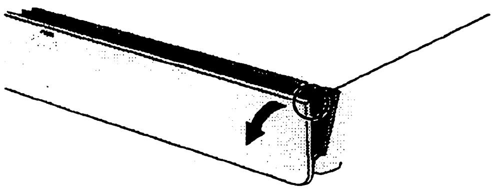
③ **REMOTE SENSOR**
This sensor picks up infrared signals from the remote control unit.

④ **POWER switch (STANDBY/ON)**
Press once to turn on the power. Press again to turn off the power.

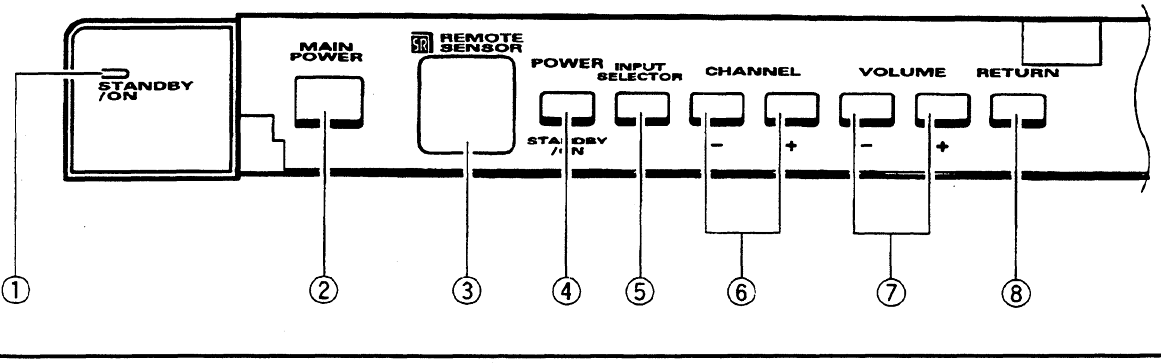
⑤ **INPUT SELECTOR button**
Press to select your program source; TV, Videodisc player and VIDEO. Each press of the INPUT SELECTOR changes the selection to the next source.

⑥ **CHANNEL buttons**
Press plus (+) or minus (–) to tune to a higher or lower channel. Only the preset channels can be tuned in using these buttons.

⑦ **VOLUME buttons**
Press plus (+) button to increase the volume, press minus (–) button to decrease it.



In some cases, the door may only open slightly when pushed. In such cases, open the door with your finger as shown in the figure below.



⑧ RETURN button

Press to set the Projection Monitor to its initial mode instantly if either sound or picture disappear from the speaker system or the screen during adjustment.

- Adjust the Projection Monitor again after pressing the RETURN button, as all settings have been cleared.

When the RETURN button is pressed, the Projection Monitor is set as follows:
PICTURE: Parameters, set to 0.
VOLUME: Remains at the last setting.
P-IN-P/MUTE/VNR: Set to OFF.
INPUT SELECTOR: Set to TV.
TV CHANNEL: Remains at the last channel set.
MTS: Remains at the last setting.
CC: OFF
COLOR TEMP: NORMAL
AV MEMORY: STANDARD

- When this button is pressed during the outer point convergence, the outer point convergence returns to the initial mode

⑨ VIDEO F. INPUT

These inputs are for Video Movie and VCR. Use RCA-type pin plug cords (the same as those used in Hi-Fi systems) for connections. When the audio source to be connected is monaural, connect the source to the L-(MONO) jack.

NOTE:
On rare occasions, an electrical discharge may occur inside the CRT. It makes a short, sharp pop and either no sound is produced or the volume level changes by itself. The Picture-in-Picture function will be cancelled automatically if an electrical discharge occurs when this function is engaged. However, VNR resume automatically when an electrical discharge occurs. When other abnormal functioning is suspected, turn off the power of the unit with the ①MAIN POWER switch, and after some time, turn on the power with ①MAIN POWER switch and ②POWER switch. If the abnormal functioning cannot be corrected, contact an authorized PIONEER service center.

CAUTION:

Do not press any operation button on the Projection Monitor or the remote control unit while recording. Signals from the MONITOR OUTPUT jacks may be temporarily interrupted when a button is pressed.

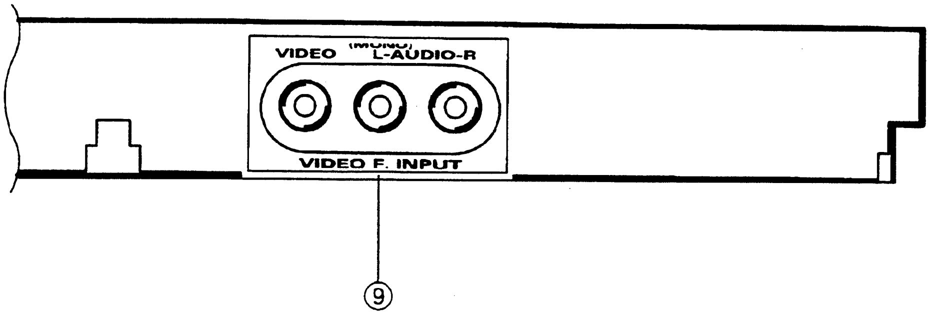
ATTENTION

The Projection Monitor Receiver will not function properly in the following cases.

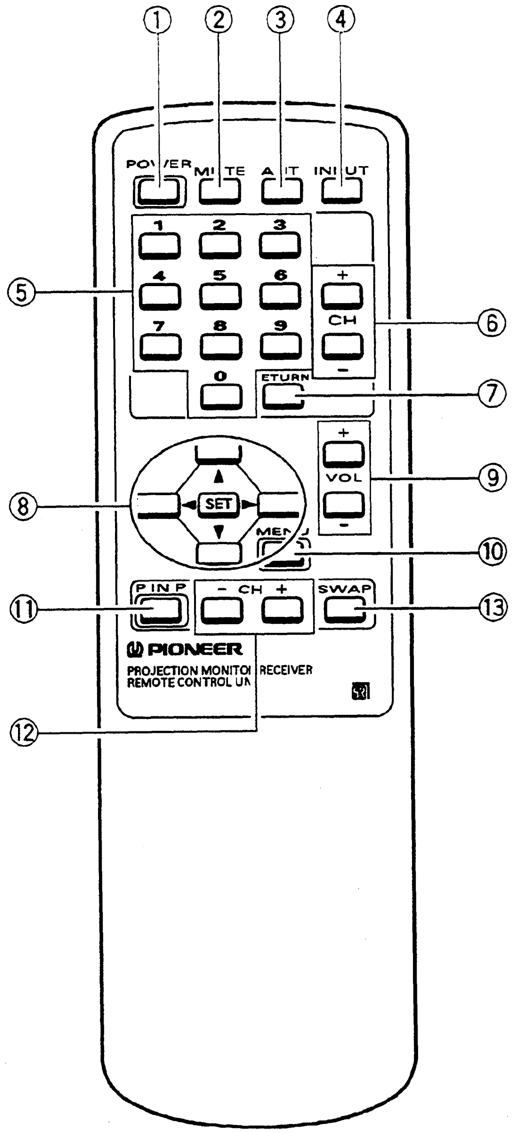
- Lightning storms.
- High static electricity environment.
- Poor voltage regulation in the power source.

If the Projection Monitor does not operate properly, reset it as follows:

1. Unplug from the power supply for approximately 1 minute.
2. Plug the power cord in a receptacle again to reset it.



• REMOTE CONTROL UNIT



① **POWER button (STANDBY/ON)**
Turns the power of the monitor on and off.

② **MUTE button**
Press to temporarily turn off the sound. Press again to return to the previous volume level. The volume display will turn red while the mute function is set and will disappear from screen when the mute function is canceled.

③ **ANT (antenna selector) button**
Press to switch between ANTENNA-A and ANTENNA-B when you wish to watch TV.

④ **INPUT button**
Press the button to select the source you wish to watch.

⑤ **Direct channel selection buttons**
Press the button (or buttons) that corresponds to the channel that you wish to watch.

⑥ **CH (channel) +, – buttons**
Press plus (+) or minus (–) to tune in a higher or lower channel. Only the preset channels can be tuned in using these buttons.

⑦ **CH RETURN (channel return) button**
Press to switch between the current channel and the channel you were watching immediately before.

⑧ **Select / Adjust / Set buttons (SET, ◄, ►, ▲, ▼)**
◄, ►, ▲, ▼: Press to select, adjust or set items on the menu screen.
SET: Press to activate the selected function.

⑨ **VOL (volume) +, – buttons**
Press plus (+) button to increase the volume, press minus (–) button to decrease it.
Volume level will appear on the screen as numbers and a bar graph. '63' indicates the maximum volume level.
The display will disappear from the screen after 2 seconds.
* Volume display will change color automatically according to the selected input mode.

⑩ **MENU button**
Press to turn on the menu screen for use in function selection. Press again to return to normal TV screen.

⑪ **P IN P button**
Press to turn the Picture-in-Picture function on and off.

⑫ **CH (Channel) +, – buttons**
These buttons can be operated when the Picture-in-Picture function is turned on and the sub picture is in the TV input mode only. Press plus (+) or minus (–) button to tune in a higher or lower channel of the sub picture.
Only the preset channels can be tuned in using these buttons.

⑬ **SWAP button**
When the Picture-in-Picture function is turned on, press to switch between main picture and sub picture.
When ANT A broadcasts are seen on the Main picture, SWAP can be performed.
When ANT B broadcasts are seen on the Main picture, SWAP cannot be performed.

■ SPECIFICATIONS

Display section

Reception system ... American TV standard NTSC system
Screen size ... 62" (SD-P62A3-K)
55" (SD-P55A3-K)
50" (SD-P50A3-K, SD-P50A3-Q)
CRT ... 7" High focus CRT x 3
Brightness (White peak)
... 350 Foot-Lambert (SD-P62A3-K)
450 Foot-Lambert (SD-P55A3-K)
540 Foot-Lambert (SD-P50A3-K, SD-P50A3-Q)
[White window signal input contrast Max.]
Horizontal resolution
... More than 1000 lines (SD-P62A3-K, SD-P55A3-K)
1000 lines (SD-P50A3-K, SD-P50A3-Q)
[Input digital test pattern (1000 lines resolution)]
Input terminals ... 3 video input systems
S-VIDEO input jack (Y/C separate INPUT) x 1
3 audio input systems
Output terminals ... MONITOR OUTPUT
Video output, audio output (For recording) x 1
Input signal ... Video signal: 1.0 Vp-p ±0.2V (75 ohms load)
Audio signal: 500mV rms
Input impedance ... Video input: 75 ohms ±10%
Audio input: 22 kilo-ohms or more
Input signal polarity ... Synchronized negative
Output terminal signal ratings:
Output terminals
(VIDEO) ... Video signal: 1Vp-p (75 ohms load)
Audio signal: 500 mV rms (100% modulation)
Output impedance ... Video output: 75 ohms ±10%
Audio output: Less than 1 kilo-ohms
Sub woofer output: Less than 1 kilo-ohms

Tuner section

Circuit type ... Video signal detection:
PLL full synchronous detection
PLL digital synthesizer system
Audio multiplex: BTSC system
Reception channels ... VHF; CH2~CH13, UHF; CH14~CH69
CATV (STANDARD, AIR, IRC or HRC)
CATV 1-125 CH
Antenna terminals
... Antenna terminal, 75 ohms UNBAL,
F-type connector (VHF, UHF MIXED)

Amplifier section

Effective output
Front both channels driven ... 2W + 2W
(THD. 1% 1 kHz, 16 ohms)
Built-in speaker system .... 10 cm (3-15/16 in) full range x 2

Electrical section, miscellaneous

Power requirements ... 120 V AC, 60 Hz
Power consumption ... 230 W, 480 VA (CSA)
External dimensions
SD-P62A3-K ... 1360 (W) x 635 (D) x 1523 (H) mm
53 9/16 (W) x 25 (D) x 59 31/32 (H) inch
SD-P55A3-K ... 1218 (W) x 578 (D) x 1417 (H) mm
47 15/16 (W) x 22 3/4 (D) x 55 25/32 (H) inch
SD-P50A3-K, SD-P50A3-Q
... 1116 (W) x 578 (D) x 1340 (H) mm
43 15/16 (W) x 22 3/4 (D) x 52 3/4 (H) inch

Weight of main unit
SD-P62A3-K ... 111 kg (244 lb 12 oz)
SD-P55A3-K ... 104 kg (229 lb 5 oz)
SD-P50A3-K, SD-P50A3-Q ... 94 kg (207 lb 4 oz)

Wireless remote control unit

Operation system ... Infrared remote control system
Power source
Two DURACELL ®"AA" MN1500 1.5 V
alkaline dry cell batteries
Dimensions ... 54 (W) x 19.4 (H) x 175 (D) mm
2 1/8 (W) x 3/4 (H) x 6 7/8 (D) inch
Weight ... 75 g (2.65 oz) (without batteries)

Accessories

Operating instructions ... 1
Warranty card ... 1
Remote control unit ... 1
DURACELL ®"AA" MN1500 1.5V
Alkaline dry cell batteries ... 2

NOTE:
Specifications and design are subject to possible modifications without notice due to improvements.